

# The Mining Journal.

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 2344.—Vol. L.

LONDON, SATURDAY, JULY 24, 1880.

WITH SUPPLEMENT. PRICE SIXPENCE. PER ANNUM, BY POST, £1 4s.

**R. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,**  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
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BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in Stocks and Shares not having a general market price. Every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing closing prices of the week.

MINES INSPECTED.  
BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUUSTELL.

SPECIAL DEALINGS in the following, or part:—  
100 Pastorena, 5s. 3d.  
175 Javali, 4s. 9d.  
25 Richmond, £15 18s. 9d.  
20 Roman Grav., £10 1/4.  
30 Marke Valley, £2 1s. 3  
10 Santa Barbara, £2.  
10 Santa Barbara, £2.  
20 So. Condurow, £10 1/4  
20 South Darren, £3.  
50 S. Penstruthal, 8s. 9d.  
10 Tankerville, £3 1/2.  
50 West Phoenix, £2 2 1/2  
25 Wheal Crebor, £5 13 9  
100 Pastorena, 5s. 3d.  
175 Javali, 4s. 9d.  
25 Richmond, £15 18s. 9d.  
20 Roman Grav., £10 1/4.  
30 Marke Valley, £2 1s. 3  
10 Santa Barbara, £2.  
10 Santa Barbara, £2.  
20 So. Condurow, £10 1/4  
20 South Darren, £3.  
50 S. Penstruthal, 8s. 9d.  
10 Tankerville, £3 1/2.  
50 West Phoenix, £2 2 1/2  
25 Wheal Crebor, £5 13 9

SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

RAILWAYS—SPECIAL BUSINESS.  
FOREIGN BONDS—SPECIAL BUSINESS.  
Fortnightly accounts opened on receipt of the usual cover.

**JAMES H. CROFTS, 1, FINCH LANE, LONDON.**  
ESTABLISHED 1842.

**R. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,**  
44, THREADNEEDLE STREET, LONDON, E.C.  
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description.

RAILWAYS, BANKS, FOREIGN AND COLONIAL BONDS.

GRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement

A List of Investments free on application.

BUMPUS has SPECIAL BUSINESS in the undermentioned:—  
10 Grogwinlon, £3 1/2.  
5 Great Laxey, £19 1/2.  
50 Goresdell & Merl, £2 1/2  
100 Glenroy, 17s. 6d.  
50 Hingston, 19s.  
30 Herodsfoot, £2 1/2.  
75 Indian Glenrock, 27s.  
40 Leadhills, £2 1/2.  
25 Marke Valley, £2 1/2.  
15 Mellanear, £5 1/2.  
50 New Peavor, £2 1/2.  
25 New Quebedec, £4.  
50 No. Herodsfoot, 10s. 6  
100 Port Phillip, 9s. 9d.  
40 Panulicillo, £4 8s. 9d.  
20 Phoenix United, £2 1/2.  
50 Parys Copper, 22s. 6d.  
15 Penhalls, £2 1/2.  
100 Pen-y-Oreodd, £2 1/2.  
20 Ruby, £7 1/2.  
15 Roman Gravels, £10 1/2  
20 Richmond, £15 18s. 9d.  
100 South Indian, 36s. 6d.  
50 So. East Wynad, £14 1/2  
10 South Frances, £14 1/2.  
20 South Darren, £3.  
15 Tankerville, £3 1/2.  
10 Tincroft, £19.  
5 Van, £19.  
50 West Holway, £2.  
40 West Phoenix, £2 1/2.  
50 Wheal Peavor, £3 1/2.  
15 West Peavor, £10 1/2.  
20 Wh. Grenville, £10 1/2.  
25 Wheal Sisters, £3 1/2.  
100 Wheal Jewell, 18s.  
3 West Tolgus, £2.  
5 West Seton, £22.  
20 Wheal Crebor, £5 13 9

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

BUMPUS devotes special attention to these Securities, and is in a position to give reliable information and advice to intending investors and others.

Shares in SOUND TIN MINES should now be bought for an important market value and good dividends. The following are particularly recommended:—  
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WHEAL PEEVOR. NEW PEEVOR.

**WILLIAM HENRY BUMPUS, SWORN BROKER.**  
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ESTABLISHED 1867.

**BERNARD R. KIRK, 5, BIRCHIN LANE, LONDON, E.C.**

Fortnightly Accounts opened, on receipt of the usual "cover," in Shares Home and Foreign, Mining Shares, Foreign Bonds, and certain Miscellaneous Securities.

"THE WEEK"—A SEPARATE EDITION from that which appears in the Mining Journal is published every Wednesday evening, containing "Notes and Queries on the Stock Markets," with Closing Prices. May be had on application.

BANKERS: LONDON AND WESTMINSTER, Lothbury; and BARCLAY, BEVAN, and CO., Lombard-street, E.C.

Messrs. ENDEAN and Co. strongly advise the purchase of well selected Lead at present low prices:—Van, Great Laxey, Roman Gravels, and Tamar, South Wheal Crebor (Copper), and Carn Camborne (Tin and Copper). The great rise will be in Lead Shares, and many of those now offering will be sought after at considerably higher prices immediately there is a run on them.

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**R. W. TREGELLAS, 19, BISHOPSGATE STREET WITHIN, E.C.**  
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MINING AGENT, STOCK AND SHARE DEALER,  
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Consolidated. Hingston Down.  
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Leadhills. Leadhills.  
Devon Gt. Cons. Marke Valley.  
Dolcoath. New Cook's Kitchen.  
Don Pedro. North Penstruthal.  
East Caradon. Nouveau Monde.  
East Crebor. N. Zeal. Kapanga.  
East Pool. Pandora.  
E. Roman Gravels. Parys Corpora.  
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Mr. REYNOLDS direct the attention of his correspondents to the accuracy of his anticipations respecting the Tin Market, and believes that a permanent improvement has set in, and that higher prices will be reached.

Mr. REYNOLDS considers a great rise in many of the principal Tin Mines as inevitable, and is himself prepared to buy largely for his correspondents.

Business transacted and references exchanged, when satisfactory, in any part of Great Britain.

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Indian, American Stocks. British, Foreign, Colonial Mines.  
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Tramway, Telegraph Shares. Shipping, Dock Shares.  
Municipal Bonds. Miscellaneous Shares, &c., &c.

**HENRY GOULD SHARP, STOCK AND SHARE BROKER,**  
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.  
BANKERS: LONDON AND WESTMINSTER, Lothbury, London, E.C.

A SAFE INVESTMENT FOR £100 or £1000 TO £10,000.

SPECIALY RECOMMENDED TO CAPITALISTS AND INVESTORS.

The MONA is the richest and most valuable mining property in the United Kingdom. Millions have been paid in profits. The mine produces copper, lead, silver, bluestone, ochre. Shares are a safe investment, and are sure to become immensely profitable, and large continuous dividends will be paid. I advise the immediate purchase.

N.B.—Dividends of £2 per share yearly may be relied upon, and at £16 per share it will give £12 10s. per cent. per annum. A good investment. I look for £4 per share yearly, and believe shares will rise to £30 per share before 1882.

Shares are scarce: 4000 of them are held in Anglesea for investment.

**THE MONA MINE (LIMITED),**  
NEAR AMLWCH, ANGLESEA.

In 8000 Shares of £5 each. Fully paid. Price £16 per share (cum 10s. dividend).

This grand mineral property occupies the eastern portion of the hill known as Parys Mountain, which has for more than a century been celebrated as containing one of the largest deposits of copper ever discovered in the British Isles.

It would be difficult to forecast the future of this remarkable undertaking. The present shareholders are sanguine that the profits of the past will be reproduced by the opening up of the large deposits in the discovery of plumbiferous blende; the opening up of copper deposits at Sidney shaft, Cairns shaft, Charlotte shaft, Henry's shaft, and others; the extension of the ochre or oxide trade; and the smelting to a regular basis the ores raised; and otherwise to carry out the objects of the undertaking, which will become one of the most profitable mining companies.

EXTRACT FROM STATEMENT OF GENERAL MEETING, 13TH MAY, 1880.

The Chairman stated that, although the company had been working only four months, they had sold of regulus 25 tons 15 cwt. 1 qr., realising £953; bluestone, 1883 tons, realising £2500; ochre, 489 tons, realising £868 9s. 8d.; pyrites, 119 tons, realising £63 16s. 1d.; solder realising £37 6s. 8d.—in all, £4422 12s. 5d. On hand and in stock, the bulk of which is sold, but waiting shipment—Copper ore, 400 tons, put down at £1000 (more likely to realise £1400); regulus, 90 tons, put down at £2700 (within the mark); ochre, 800 tons, put down at £1200; bluestone, 800 tons, £900. Total £5300, keeping well within the mark. That is £10,223. Well, I will astonish you. That has all been realised at a cost of £3223—leaving a net profit of £7000. These facts require no flowery language, for a more satisfactory statement was never put before shareholders.

MONA MINE, 17th June, 1880.

I visited this mine on the 17th and 18th of June (last month), and was astonished at the gigantic workings. I have seen the Van, Dolcoath, Devon Great Consols, but none of them will compare with Mona. Van has paid £351,000 in dividends, and shares in 15,000 rose to £24 each. Dolcoath has paid £500,753 in dividends, and shares have been £96 each. Devon Great Consols has paid £1,208,245 in dividends, and shares were once £200 each, with £1 only paid up. Mona has far exceeded all these mines put together, having paid several millions of pounds in profits. I say now, without fear of contradiction, Mona has not its equal at the present time in the United Kingdom. The mine was worked in the time of the Romans; it has been working the past 112 years without a stop, and during this time millions of pounds have been given in profits. It is still immensely rich. There are 270 hands employed on the Mona Mine.

DIVIDEND MEETING.—At a meeting of the directors of the Mona Mine, held on Wednesday, the 14th July, 1880, an interim dividend of 10s. per share was declared from profits made, payable the 1st August. All shares bought this month (July) secure this dividend.

P.S.—Another very important point is "The North Discovery lode," which in Parys Mountain gave £500,000 profit many years ago. This lode is worked up to the boundary in the Parys Mine, but not yet touched in the Mona, and it goes right through their property.

The present agent, Capt. William Hughes, has been there for 20 years; he knows every corner of the mine, and is a thoroughly practical miner.

They can dress and sell 4000 tons of ochre yearly; this will be doubled. They can raise and sell 1500 tons of bluestone yearly; this will double in time—in fact, the supply is unlimited. They have also an unlimited supply of gas purifying oxide. When the new engine gets to work they will raise and sell 300 to 400 tons of copper ore monthly from Cairns' shaft. They are now raising 250 tons monthly from Sidney shaft; this will be increased. Next year they will raise 600 or 700 tons of copper ore monthly from Cairns' and Sidney shafts alone, and I quite believe that in 1882 they will sell 1000 tons per month of copper ore. They have some 20 shafts on the mine, which is about one mile square.

NORTH PART OF MINE AS FOLLOWS:—  
Henry's shaft, 30 fathoms deep. Cairns' shaft, 80 fathoms deep.  
Charlotte's " 55 " Sidney's " 55 "  
Carregdoff's " 30 " Lemlin's " 30 "  
Beer's " 30 " Tidy's " 30 "  
Marquis's " 90 " Pearl's " 100 "  
Treweek's " 30 " There are several other small shafts.

From Cairns' shaft 300 and 400 tons of copper were raised monthly, and will be again after the engine goes to work, and between these two shafts there is a run of 250 fathoms of ground no doubt as rich.

I would here remark Pearl's shaft was rich 90 fathoms deep, other shafts having same run of ore ground will no doubt prove as rich to the same depth and below it.

SOUTH PART OF MINE AS FOLLOWS:—  
Viceroy's shaft, 65 fathoms deep. Sanderson's shaft, 30 fathoms deep.  
Blackrock's " 30 " Clay's " 30 "  
Calciner's " 30 " Bluestone " 30 "  
Old Bluestone " 30 "

The same remarks will apply to these shafts in sinking below their present depths.

The best Bluestone sells as high as £3 per ton. Average it at £2 per ton. The best ochre sells as high as £2 10s. per ton. Average it at £1 15s. per ton. The regulus sells as high as £37 per ton; now worth £30 per ton. This depends upon the price of copper.

Mona is a magnificent mining property, second to none, and equal to any three mines in the United Kingdom.

I went over this property again on Monday, 5th July, and afterwards visited the large Smelting-works, where I saw £3000 worth of regulus ready for sale.

N.B.—I saw the whole of the Works. I look upon the Mine as an "Investment" which will last and pay well for generations to come.

It has not its equal in this country. I strongly advise the purchase of shares at £16 per share for a rise of 100 per cent., and for continuous dividends. My statements are "facts" which anyone may verify on going to the property. (Two miles from Amlwch, in Anglesea.)

I ADVISE THE PURCHASE OF SHARES IN THE FOLLOWING MINES:—  
SOUTH DARREN £2 15 0 to 3 0 0 DERWENT £2 5 0 to 2 10 0  
HERODSFOOT 3 10 0 " 3 15 0 WEST PHOENIX 2 0 0 " 2 5 0  
ROM. GRAVELS 10 0 0 " 10 5 0 WHEAL JEWELL 0 17 6 " 1 0 0  
WHEAL JANE 3 15 0 " 4 0 0 EAST CARADON 1 5 0 " 1 7 6  
HERODSFOOT.—This mine is making profits, and opening up rich. Only 3000 shares. Only £1 5s. per share called up. No mine in the country with so small a capital can show such results in so short a time; £5000 worth of silver-lead ore sold in 18 months. £79,000 has been paid in dividends.

WHEAL JANE.—They are raising 60 tons of tin four-monthly. At present price of tin showing over £2000 yearly in profits. Dividends not far off. Only 2048 shares. The cheapest tin shares in Cornwall, and well worth buying.

**HENRY GOULD SHARP, STOCK AND SHARE BROKER,**  
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PATENTERS OF SAFETY FUSE, having been in-  
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tively used by others, they beg to call the attention of  
the trade and public to the following announcement:-

EVERY COIL OF FUSE MANUFACTURED by them has TWO SEPARATE  
THREADS PASSING THROUGH THE CENTRE OF GUNPOWDER, and BICK-  
FORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as  
THEIR TRADE MARK.

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He will be enabled to obtain his profession as a Solicitor in five, or if he be a Gra-  
duate in three years. Cost of living about £150. In the meantime he will have  
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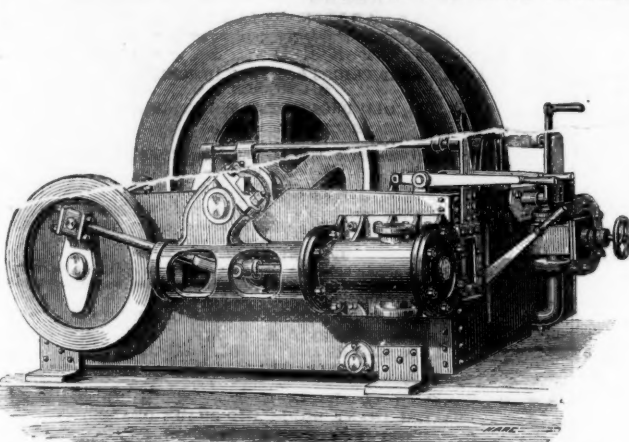
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**TRUBNER'S LITERARY RECORD.**—The current issue—Nos. 5 and 6, new series—of Trübner's *American, European, and Oriental Literature Record* contains an interesting reference to Prof. Max Müller's article in the *Journal of the Royal Asiatic Society on Sanskrit Texts discovered in Japan*, and to the various other papers in the same *Journal*, including one by Mr. J. W. Redhouse, on the identification of the *Falṣ al-Dawn* of the Muslims with the *Zodiacal Light* of Europeans, which will be generally appreciated. Mr. Redhouse points out that this identification shows that though the zodiacal light is a very recently discovered phenomenon for European astronomers, a knowledge of its appearance has been possessed by the inhabitants of South-Western Asia, if by no others, in the century between the promulgation of the Gospel and Qur'an respectively, and presumably must have been universally known there from very early days. Secondly the zodiacal light being totally unknown to Europeans until about two centuries ago, it is clear that their forefathers never could have come from that central point of Asia so dear to modern Sanskritists from whence they would fain make the Aryan race to radiate, that is from the snowy table-land of Pamir. The zodiacal light must be as well known to the shepherds of that plateau as it is to the nomads of Arabia and



Mesopotamia. It must always have been well known to them, and once known to a people such a phenomenon would never be totally forgotten in latitudes where it was visible. Our Aryan race came not then from Pamir as their radiating centre. Ethnologists may well weigh this pregnant indication. The literary intelligence contains the usual large number of notes, amongst which is one of great interest to many readers of the *Mining Journal*—that an important article on the subject of a Patent Law for Holland is shortly to be published in *De Indische Mercur*. There are full bibliographies of the languages of the Philippine Islands and a list of new American books and recent importations; notes on European literature, and a list of books printed in Malagasy and English. Amongst the announcements of works in preparation is a Student's Anglo-Polish Grammar by Mr. J. J. Baranowski, whose name is already known to readers of the *Journal*.

### Registration of New Companies.

The following joint-stock companies have been duly registered:—

**THE LIVERPOOL CITY OMNIBUS COMPANY (Limited).**—Capital 20,000*l.*, in shares of 10*l.*. To acquire, carry on, and extend an established business. The subscribers (who take one share each) are—W. Busby, Liverpool; J. H. Kenion, Liverpool; A. Tyrer, Liverpool; G. Bushforth, Liverpool; T. H. E. Gill, Liverpool; W. Thomas, Liverpool; W. Busby, jun., Liverpool; J. Waters, Liverpool.

**GENOVEVA NATURAL SPARKLING MINERAL WATER COMPANY (Limited).**—Capital 20,000*l.*, in shares of 5*l.*. To purchase a certain property situated in Germany, for the purpose of selling and manufacturing mineral waters. The subscribers (who take one share each) are—G. Brooks, 25, Camberwell Grove; G. Glover, jun., 6, Victoria-street; L. Faulkner, 36, Welbeck-street; F. W. Brewster, Holstead; H. A. Lamb, 11, Colville Gardens; C. Anderson, Hackney; A. Davidson, 80, Upper Thames-street.

**THE LEES COTTON SPINNING COMPANY (Limited).**—Capital 50,000*l.*, in shares of 5*l.*. To acquire a business in Lancashire, and carry on the trade of cotton spinning, &c. The subscribers (who take five shares each) are—T. Wood, Oldham; W. Brown, Middleton; J. Burgess, Manchester; R. B. Brooks, Mossley; R. Smith, Bolton; J. R. Smith, Bolton; H. Shaw, Oldham.

**THE RUABON COAL AND COKE COMPANY (Limited).**—Capital 30,000*l.*, in shares of 100*l.*. The acquisition of the undertakings of the Ruabon Coal Company (Limited), and of the North Wales Coke Company (Limited), on the terms of an agreement made. The winning, working, raising, getting, manufacturing, selling, and dealing in coal, cannel, slack, culm, ironstone, fire-clay, freestone, and other minerals and mineral substances found in the mines situate in the county of Denbigh, North Wales, and elsewhere. The manufacture and sale of coke, bricks, tiles, and other products, and generally to carry on the business of a mining company in all branches. The subscribers are—J. Jones, Oswestry, solicitor, 10; H. Kent, 4, St. Dunstan's Alley, coal factor, 10; A. Clarke, Forest Hill, clerk, 5; A. M. Clarke, 4, Dunstan's Alley, coal factor, 50; H. Dennis, Ruabon, mining engineer, 20; H. D. Gooch, Maida Hill, no occupation, 1; R. H. Jay, Reform Club, no occupation, 50. The first directors are the following:—Messrs. Jones, Kent, Dennis, Gooch, and Jay. Qualification being fixed at 10 shares. The number of directors not to exceed six or be less than three.

**THE HENLEY ON THAMES WATER COMPANY (Limited).**—Capital 10,000*l.*, in shares of 10*l.*. To supply Henley and district with pure, softened water. The subscribers are—J. Church, 17B, Great George-street, 5; R. B. Paten, St. Alban's, 5; G. D. Robertson, Palace Chambers, 5; R. Macintyre, Stratford, 2; G. Miller, Lee, 2; A. Dixon, 7, Catherine-court, 2; G. Grant, Wimpole, 2.

**THE SOUTH PACIFIC GUANO COMPANY (Limited).**—Capital 1,000,500*l.*, in shares of 10*l.* and 5000*l.*. The getting, shipping, and selling of guano and other substances called guanites. The subscribers (who take one share each) are—J. B. Batten, 32, Great George-street; J. Proffitt, 2, South-square; A. O. Scott, 8, Barnard's Inn; F. Murton, 21, Brompton Crescent; G. Joseph, 16, Queen-square; F. J. Wall, Northcote-road; G. J. Lavel, Peckham.

**THE HALLWELL GAS ENGINE COMPANY (Limited).**—Capital 10,000*l.*, in shares of 10*l.*. To carry on the trade of gas engine manufacturers. The subscribers are—R. Hallwell, Blackburn, 1; J. Bentley, Middleton, 1; M. Briggs, Ramsgrave, 1; J. Beirns, Blackburn, 20; J. Bickerton, Manchester, 20; R. T. Seward, Manchester, 1; T. Walmsby, Manchester, 1.

**THE BLACKPOOL AQUARIUM BUILDINGS COMPANY (Limited).**—Capital 50,000*l.*, in shares of 5*l.*. To erect an aquarium, and carry on the usual business connected with such an undertaking. The subscribers are—W. H. Cocker, Blackburn, 1000; J. Hardman, Blackburn, 100; J. Howarth, Blackburn, 100; J. H. Jones, Blackburn, 100; H. Fisher, Blackburn, 50; W. Birch, Blackburn, 25; A. Moore, Blackburn, 8.

**THE BULL BRIDGE BRICK COMPANY (Limited).**—Capital 5000*l.*, in shares of 50*l.*. The manufacture and sale of bricks, tiles, &c. The subscribers are—J. R. Hewitt, Uttoxeter, 2; L. Haselhurst, Derby, 4; E. Freeman, Derby, 1; T. Woolley, Derby, 1; T. Hill, Derby, 2; J. Spory, Wirksworth, 2; E. C. Swinden, Birmingham, 1; J. Collard, Derby, 3.

**VENTNOR TRAMWAY COMPANY (Limited).**—Capital 25,000*l.*, in shares of 5*l.*. To construct, maintain, and work a tramway in the Isle of Wight. The subscribers are—J. Bravo, 2, Palace Green, 20; S. Currie, Ventnor, 5; J. M. Stobart, Ryde, 10; H. Pincock, Newport, 10; F. H. Atherley, Shanklin, 5; P. H. Peters, 4, Victoria-street, 5; H. J. Hornby, North Brixton, 5.

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**CARDIFF DISTRICT AND PENARTH HARBOUR TRAMWAY COMPANY (Limited).**—Capital 50,000*l.*, in shares of 5*l.*. To construct, equip, maintain, and work a certain tramway in the borough of Cardiff. The subscribers (who take one share each) are—H. R. Snelgrove, 7, Craven-street; D. Jones, Cardiff; H. Bowen, Llandough; W. B. Partridge, Abergavenny; T. Gibbs, Stoke Newington; H. E. Sullivan, 4, Victoria-street; M. Morgan, Cardiff.

**NEW SAINT PATRICK LEAD MINE (Limited).**—Capital 10,000*l.*, in shares of 1*l.*. To acquire, by purchase or otherwise, certain mines and minerals contained in lands known as Top-y-Fron, in the parish of Halkin, Flint, together with all rights, privileges, works, plant, machinery, and effects, and any other lands, mines, &c. The smelting and rendering merchantable any ores, minerals, and earths to be obtained from such mines and mineral lands, and generally to carry on the business of a lead mining company in all branches. The subscribers (who take one share each) are—J. Gurney, Forest Hill, solicitor; E. H. Lowe, 13, Coleman-street, gentleman; A. Gathercole, Brixton, clerk; W. E. Vickers, 1, Finch-lane, accountant; A. J. Crofts, 78, Ladbroke Grove-road, clerk; J. J. Lynch, 324, Great Winchester-street Buildings, engineer; T. W. Miller, Brixton, publisher.

**ARMY AND NAVY HOTEL (Limited).**—Capital 100,000*l.*, in shares of 5*l.*. To carry on the business of a hotel and tavern keeper, &c. The subscribers (who take one share each) are—C. H. Moore, 27, Leinster-terrace; M. Hearn, 42, Woburn-place; W. Taylor, 13, Ladbroke Gardens; F. C. Hughes-Hallett, 4, St. Albans-place; E. M. Cookesley, Junior United Service Club; A. Hollings, 9, Percy-street; J. Keyworth, 20, Regent-street.

**STEAMSHIP ROSSMORE (Limited).**—Capital 50,000*l.*, in shares of 10*l.*. To carry on a shipowner's business. The subscribers (who take one share each) are—W. Johnston, Liverpool; R. Cornelius, Liverpool; E. Paul, Liverpool; F. Matthison, Liverpool; H. L. Smyth, Liverpool; J. Bourgoise, 19, Brunswick-street; E. Johnston, Liverpool.

**WARREN'S LUBRICANT COMPANY (Limited).**—Capital 60,000*l.*, in shares of 10*l.*. To manufacture, buy, sell, and deal in lubricants. The subscribers (who take one share each) are—S. E. Carlisle, 8, Duke-street; F. P. Warren, Cosham; J. C. S. McLay, 1, Tressilean-road; S. W. Richards, Bartholomew House; N. Greene, Bartholomew House; H. Green, 35, Queen Victoria-street; T. H. Green, 35, Queen Victoria-street; E. Coombe, 1, Water-lane.

**BLYTH AND COWPEN GAS LIGHT COMPANY (Limited).**—Capital 10,000*l.*, in shares of 5*l.*. To carry on the business of a gas company.

The subscribers are—W. Gray, West Hartlepool, 600; J. Bell, Blyth, 30; J. Gray, Blyth, 90; R. Lough, Blyth, 5; Isabella Lough, Blyth, 15; J. Robinson, Blyth, 45; W. Whitehead, Blyth, 30; T. L. Milburn, Blyth, 60.

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**GLANAMON TIN-PLATE COMPANY (Limited).**—Capital 20,000*l.*, in shares of 50*l.*. To acquire certain tin-plate works in the county of Carmarthen, and to carry on the business connected therewith. The subscribers are—B. Roberts, Landore, 6; J. Ray, Pontardawe, 4; W. Howell, Pontardawe, 4; J. Morgan, Cwmaman, 4; W. Jones, Cwmaman, 2; R. Phillips, Cwmaman, 1; J. Jones, Cwmaman, 2.

### Meetings of Public Companies.

#### NEW WHEEL PEEVOR MINING COMPANY.

An ordinary general meeting of shareholders was held at Philpot-lane on Thursday.—Sir JOHN HAYES, Bart., in the chair.

Mr. THOMAS PRYOR (the purser) read the notice convening the meeting and the statement of accounts, charging the costs up to June 26. They showed that the labour costs had amounted to 149*l.* 2*s.* 6*d.*, the merchants' bills to 115*l.* 3*s.* 4*d.*, including the amount to Mr. J. L. Peter for sett from the Lords of the Manor of Treleigh. On the other side, the call of 10*s.* per share realised 1500*l.*, and the discounts received 10*s.* 2*d.*, leaving a balance of 1207*l.* 7*s.* 5*d.* in favour of the mine. The purser added that the accounts were charged up to the end of June, which was as late as they could possibly be charged. The balance in hand of 1207*l.* 7*s.* 5*d.* would carry them on for some time; at all events, for nine months to come, and he hoped that in the meantime they would meet with some discovery in the course of the operations of which they would hear from Capt. White, and that at the next meeting they would have the pleasure of showing the shareholders credit for some tinstuff sold. Capt. White would read his report, from which it would be seen that the prospects of New Wheel Peavor were of an exceedingly encouraging character. So far their operations had only been on a limited scale, and the costs had been small, as they had been really feeling their way; but there could be little doubt that they had the same lode as at West Peavor, and he hoped that before the next meeting some good discoveries would be made in the mine.

July 22.—In presenting you with the following report I beg to say that our operations since the last meeting have been chiefly in cross-cutting at the adit level. Several trial pits have also been sunk in various parts of the set, and lodes discovered, the outcrop of which is very good indeed, but in order to prove the lodes to a greater depth we cleared up one of the shafts to the adit level 22 fms. deep which was sunk by former workers. We at once erected a horse-whim to discharge the stuff, and fixed a permanent ladder-rod therein. A cross-cut was driven north of this shaft 30 fms. with the same intention. I have no doubt that we have (viz.) cut West Peavor lodes. This is the cross-cut we are now driving, and have six men engaged therein. Since we commenced this we have driven 17 fms., and we calculate to cut the lode in about 8 fms. further driving, and judging from the congenial nature of the ground now in the end, which is of a similar character to the ground in Wheel Peavor, I am strongly of the opinion a good lode will be met with. As soon as we intersect the lode we shall at once commence to rise in the back and sink from surface in order to effect communication and open up a new shaft thereon. We found when cleaning out the adit level about 15 fms. north of the shaft there was a counter lode, the direction of which is north of east and south of west, and the level is extended on this to a great distance, and in several places it has been worked in the back and bottom, which evidently shows it must have been productive at these points. We intend driving on this as soon as possible, as this will form a junction with the lodes as we go east. I must again repeat what I have often said, that is, looking at the situation of the mine in connection with Wheel Peavor and West Peavor, I have the strongest opinion it will prove to be a great success.—W. WHITE.

Capt. WHITE added that of course the work which they had done in the mine had been entirely in prospecting at surface and in cross-cutting at the adit level. They had not yet reached the adit level which had been seen at surface. They had sunk for a depth of 22 fms., and had continued the cross-cut, the belief being that they had three lodes—the north, the middle, and the south lodes—which they had in Wheel Peavor, and also in West Peavor, and from which the raisings of ore were being made. In this, as in the other mines, their great object was to get down to a sufficient depth as rapidly as possible.

The CHAIRMAN said that they had had a most exceptional and promising account of the mine from Capt. White, with which everyone ought to be extremely pleased. The accounts presented were also of a very satisfactory character, showing as they did a balance in favour of the mine amounting to 1207*l.* He had pleasure in moving "That the accounts as presented, showing a balance in favour of the adventurers of 1207*l.* 7*s.* 5*d.*, be allowed and passed, and that the same, together with the agent's report, be printed and circulated amongst the shareholders."

Mr. HERITAGE seconded the motion, which was carried unanimously. On the motion of Mr. ARTHUR, seconded by Mr. HILLS, it was decided that the meeting should be held every four months.

Mr. MITCHELL proposed a vote of thanks to the Chairman, and the proposition was carried by acclamation.

The CHAIRMAN briefly returned thanks for the compliment, and then proposed a vote of thanks to Capt. White and Mr. Pryor for their exertions on behalf of the shareholders.—Mr. HERITAGE seconded the proposition, which was adopted.

Mr. PRYOR also acknowledged the compliment, and observed that time was the only thing required to make both New and West Wheel Peavor Mines thoroughly successful, as the mine was at the present time in a very promising position. He said it was a pleasure for him to do his best for the shareholders, and he would continue to do all he possibly could to make the undertaking a success.

The meeting then terminated.

#### WEST WHEEL PEEVOR.

The ordinary general meeting of shareholders was held at the offices of Mr. Hills, Philpot-lane, on Thursday.

Mr. F. C. HILLS, in the chair.

Mr. THOMAS PRYOR (the purser) read the notice convening the meeting, and the accounts, which showed on the expenditure side balance against the mine at the meeting on Jan. 29, 472*l.* 0*s.* 6*d.*; bankers' charges to June 30, 16*l.* 5*s.*; labour costs, 815*l.* 11*s.* 11*d.*; merchants' bills, 355*l.* 18*s.* 6*d.*; and lords' dues, less income tax, 7*l.* 8*s.* On the receipts side the accounts showed that the call of 5*s.* per share made at the last meeting realised 750*l.*, and the tinstuff sold 151*l.* 3*s.* 6*d.*, leaving a balance against the meeting amounting to 836*l.* 0*s.* 3*d.*. The purser stated that the accounts included every liability of which he was aware, to the end of June last, which was as close as they could possibly charge them. The sales of tinstuff—realising 151*l.* 3*s.* 6*d.*—were more test samples than anything else, and he hoped and believed that they would have a much larger credit at the next account for tin sold. Capt. White was present, and after reading his report would be glad to answer any question with regard to the mine, while he would be happy to answer any questions upon the accounts.

Capt. WHITE then read the following report:—  
July 22.—Since our last meeting we have completed the sinking of Michell's engine-shaft to the 45, and have driven the cross-cut north 19 fms. We have also driven the cross-cut to intersect the main part of the lode, which we are now working on in the 35. In driving this cross-cut we met with several branches, all of which produce tin, and we consider are droppers or feeders of the lode. One of these we cut in the cross-cut on Saturday last, and it produces some very fine stones of tin. We are looking forward to meeting with a productive lode at this level, which we hope to meet in about a week hence. The 35 is driven west on the main part of the lode 10 fms.; the lode in the end is fully 3 fms. wide, and produces some very fine stones of tin, worth about 10*l.* per fathom. We are also sinking a winze in bottom of this level, on this lode; the winze is down 5 1/2 fms.; the lode is the full size of the winze, and has a most promising appearance. We value the lode at 10*l.* per fathom. This winze will open up communication with the 45 when the lode is intersected at this level, as referred to above. We shall then have a good section of ground made available for stopping. Since we have been cross-cutting in the 45 a portion of our shaftmen have been engaged in cutting shaft pit, fixing lift, and making all other necessary preparations for sinking, which is now done, and we have commenced sinking the shaft below the 45 for another lift, which we hope to complete in about four months. Our engine is keeping the water of the mine very easily at present; but as there will, no doubt, be a considerable increase of water from cross-cutting and other causes during the coming winter, we have set our 50-inch pumping engine-house to build, and have confined the masons to a certain time for its erection, so that we may have the large engine and pitwork ready for working when required. We are pleased to say the mine is opening up very satisfactorily, and as depth is attained we find the lode is becoming more productive.—W. T. WHITE, J. PRYOR.

Capt. WHITE added that it would be seen from the valuations laid down in his report that the lode was increasing in value as depth was attained. He had been in hopes that they would have cut the lode in the 45 fm. level before the meeting, and he now expected to cut it every day, and, judging from the lode as it was seen in the winze sinking below the 35 fm. level, he had no doubt of its productiveness at the lower level when it was reached. The stuff they had sampled from the lowest level was not of a rich quality, but he found that the southern lode of the district upon which they were working in this and in Wheel Peavor was not so productive near the surface as at a greater depth. That was, he believed, the general characteristic of the district. In Wheel Peavor the 90 fm. level, which had lately been cut, was a very good lode indeed. That was at a depth of 140 fms. from surface, and he might mention that the 45 fm. level at Wheel Peavor was, owing to the rise in the hill, equal to their 55 fm. level. He had no doubt that when they communicated the winze at the 45 fm. level they would return ore which would go a great way towards paying the labour costs. As regarded the general prospects of the mine they were never better than at

the present time, and he thought that at the next meeting they would probably be able to show a much better statement than they could at the present time. (Hear, hear.)

Mr. THOMPSON asked if the tin stuff sold for 151*l.* would pay for working it. Capt. WHITE replied that it would. The stuff was all got out of the ends and winzes, as they had not stopped any ground at present.

The CHAIRMAN asked whether they could not commence stopping. Capt. WHITE replied that the ground had not been rich enough, but it would pay for tributing it by-and-by, and, judging from the stuff raised in sinking the winze below the 35 fm. level, he believed the ground would pay for stopping at the 45 fm. level, which he hoped to reach in about two months' time.

Mr. MITCHELL remarked that the Peavor lodes were never very productive at shallow depths, and he supposed that was the reason they were so long over-looked. Some lodes were productive at 25 or 30 fms. of surface, but it seemed that in the Peavor it was 50 or 60 fms. before the lodes were found to be rich.

Capt. WHITE then pointed out on a sectional plan the points of operations, and stated that during the six months which had elapsed since the preceding meeting they had sunk the shaft 12 fathoms, and driven the levels 18 fathoms. He thought by the date of the next meeting they would be paying the labour costs.

Mr. HERITAGE asked how the mine fared with respect to water?—Capt. WHITE replied that they had very little water indeed, and that was a great feature in the mine. The winze was as dry as that room. During last month they stopped the engine for about 40 hours while they changed the lift, and they only had about 4 ft. of water to fork, so they could imagine what a little water they had in the mine. Indeed, they had to send some water from surface to set the lift to work, but he expected they would get more water when they got to the Wheel Diamond lode.

Mr. MITCHELL said the engine-house, which was now in course of erection, would be built very cheaply, but he thought it better to put the engine up at once to provide for any contingency.

Mr. HERITAGE asked what was the size of the engine?—Mr. MITCHELL replied that it was a 50-inch cylinder engine.

Capt. WHITE said their great object was in depth, and therefore they wished to get down as fast as possible.

Mr. HERITAGE observed that it would be as well to get down to the right ground before tin should be at 33*l.* again. (Laughter.)

The CHAIRMAN then moved "That the accounts, showing a balance against the mine of 836*l.* 0*s.* 3*d.*, be allowed and passed, and, together with the agent's report, be printed and circulated amongst the shareholders."

Mr. MITCHELL seconded the motion, which was carried unanimously. The PURSER said a call of 7*s.* 6*d.* per share would give them 1257*l.* That would pay off the debt balance, and leave them about 300*l.* to go on with. That would put the mine into a business-like position, for he thought it wise to pay the liabilities as they accrued.

On the motion of Mr. HERITAGE, seconded by Mr. THOMPSON, a call of 7*s.* 6*d.* per share, as recommended by the purser, was made; the PURSER stating that the whole of the last call and the arrears then outstanding had since the January meeting been paid. It was decided that in future the meeting should be held once in every four months.

A vote of thanks was then passed to Mr. Hills for presiding, and for his kindness in giving the shareholders the use of his offices for the meeting, and the CHAIRMAN briefly acknowledged the compliment.—The meeting then closed.

#### ARENDAL MINING AND SMELTING COMPANY.

The general meeting of shareholders was held at Newcastle-on-Tyne, on July 16.—Rev. DIXON BROWN in the chair.

The usual preliminaries having been disposed of—

The CHAIRMAN, after alluding to the results of the past operations, said that he thought there were reasons for hoping for a more prosperous future. The total sales of copper ores and regulus in the twelve months embraced in the accounts were 142 tons, realising 2258*l.*, whilst the sales during the last two months were estimated to produce 2387*l.*. A further cargo of about 300 tons was expected to be ready about July 20, and another a month later, with succeeding shipments, as long as the weather remained open, and on completion of arrangements suggested he was informed that they might continue shipments during the whole of the winter. Capt. Daw, sen., had been appointed local manager, while his son would retain his present position of resident agent. Capt. Daw, sen., had assured the board that if allowed to carry out his recommendations he could make the mine a dividend-paying property in 12 months. Since the closing of the accounts all the calls had been paid, and the scheme proposed would increase the capital by 24,000*l.* (that is, by 3000 shares of 4*l.* to be paid up and 3000 to be issued as bonus), and give them 12,000*l.* cash, which was sufficient to pay off existing debts, provide 4000*l.* required for works, and leave them nearly 4000*l.* reserve. If this scheme was sanctioned Art. 109 would have to be modified to enable it to be carried out.

Mr. DAW, in explaining the operation he recommended, said the expenses for next year would probably be a little higher, as more men would be working, but the charges for engineers, travelling expenses, &c., would be reduced. As soon as the machinery was in working order they would have a large output from one of the mines alone. He was quite satisfied that at the end of the things would be in a very different position. To make the alterations he desired in the dressing machinery would take about four months, but if they were now completed he should be prepared to continue dressing operations throughout the winter, as was done at the silver mines in Norway. He was satisfied that the ore was there, and that the additional capital now asked for would put the concern in good working order. He was quite certain that when all the machinery was completed they could return 400 tons of ore per month. The Bilstad mine, which could be unwinded in two or three weeks, would soon be opened out, and with the machinery in order they could have an output of 50 tons with more men.

The report and accounts were then unanimously adopted, and the election of Mr. Peter Watson as director, in the place of the late Mr. S. W. Davies, confirmed.

Mr. WATSON, in returning thanks, said that he had been engaged in mining pursuits since he left Yorkshire in 1844, and whatever experience he had gained should be at the service of the company. He congratulated the shareholders on the harmony which had resulted from the proposals which he had joined in urging at the last meeting. With Capt. Daw as manager, and provided with the capital asked for, his firm impression was that a good mine would be opened up which would yield large profits to all concerned.

After several suggestions it was eventually resolved, on the proposition of Alderman HEDLEY, seconded by Mr. CAIRNS, that the remuneration of 375*l.* per annum, or such other sum as may be determined upon in general meeting, to include ordinary travelling expenses to attend board and other meetings in England, be divided among the directors as they think fit.

A resolution making the necessary alteration in Article 109 was carried, and the directors having agreed to consider the propriety at a future meeting of modifying Article 87 relative to the notice to be given by any person, other than a retiring director, offering himself as a candidate for the office of director, the proceedings terminated with a cordial vote of thanks to the Chairman.

#### DERESBY MOUNTAIN MINING COMPANY.

A special general meeting of shareholders was held at the offices, Gracechurch Buildings, yesterday (Mr. J. Y. WATSON in the chair), for the purpose of subdividing the shares, and increasing the capital, and of passing such resolutions as may be required and agreed upon for that purpose. A note appended to the notice calling the meeting stated that the object was to subdivide the capital of the company into 25,000 shares of 1*l.* each, to be given *pro rata* (20 for one) to present holders, and the balance to be a reserve capital in case of need.

Mr. C. B. PARRY, the secretary, read the notice calling the meeting. The CHAIRMAN said: Gentlemen, this meeting has been called at the special request of many of the largest shareholders in the mine (holders of the majority of it), who think now that the heavy work connected with the Valley adit and Gorse shaft has been completed, and the mine may be expected shortly to make regular and good returns, that the shares should be subdivided, and that each holder of 1-10th share should receive 20 shares fully paid-up of 1*l.* each. Resolutions, therefore, will be proposed to alter the Memorandum of Association accordingly, and to subdivide the mine into 25,000 shares of 1*l.* each, of which 20,480 will be absorbed by present shareholders, and 4520 by new shareholders, and the directors, and should they think it desirable at any time to issue 1000 of them they will be offered *pro rata* at par to present holders only. In regard to the mine, it will be remembered that in December, 1879, Captain Waters, of Roman Gravel, was sent to inspect the property, and report upon the best means of working the ore just discovered in the great stope at No. 4, and afterwards proved at great expense at the No. 5 level, and in the sump below it. He recommended sinking the Gorse shaft to the depth of 15 fms. below No. 5, and then drive and get under the ore gone down in the sump. This work has been done, and the shaft is now 42 fms. deep, and driving is proceeding towards the ore. The cost of this, including a steam-engine to pump the water up to No. 5 has been about 1079*l.*. The agents are of opinion that should the lode in No. 6 prove equal to that in No. 5, and it should be remembered the sump-winze 12 ft. below No. 5 is even richer than the level above, we shall have a mine which can be worked profitably for many years to come. They consider it would take five years to stop away the ore already discovered. In conclusion, the Chairman moved a resolution carrying out the object for which the meeting was called.

The CHAIRMAN, in reply to a remark, said the proposed subdivision was carried out in compliance with the wishes of a very large majority of the shareholders.

Mr. H. W. LAMB said it was about 12 months since he visited the mine. When he was in the sump he had never seen a finer lode for lead. The lode extended wider than that room, and no doubt it would increase and improve as it went down. It was almost a pity that they did not get through the lode before this meeting, so that the shareholders might have known it, but it would come in good time. He had every faith in the mine turning out profitably. He hoped to go down shortly, and if so he should be happy to inform the shareholders of what he saw.

The CHAIRMAN, in reply to an observation, said that they had not yet seen the lode under the sump, as they had been driving to get under it, but the agents were satisfied that they would in a month or two get into a large body of ore.

The CHAIRMAN, in reply to Dr. SILVESTER, said there was no immediate necessity for issuing the shares to make up more capital, but he pointed out that it was well to strengthen the position of the company. He also mentioned that they had had heavy work to perform; but, amongst other things, they did not expect to have the expense of the steam-engine. If they got into the lode at once, of course, they would not want a penny more capital, but it might be two months before they got into the lode.

Mr. LAMB said, as a matter of fact, they could make good returns at once, but it would not be advisable to do so.

Dr. SILVESTER thought they had been rather a long time in developing the mine.

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The CHAIRMAN replied that as a matter of fact they had only been at work about two years, which was scarcely a long time for opening out and developing a large lead property.

Mr. ORLANDO WEBB, who had fully agreed with the proposal of the directors as to the subdivision of the shares, expressed a doubt whether they could do it at the present meeting, inasmuch as it would first be necessary to alter the Memorandum of Association, but this could easily be done, and the proposed subdivision take place at a future meeting. He moved—"That after hearing the report of the directors this meeting is of opinion that it is desirable to sub-divide the present shares, and increase the present capital as proposed; and that it is desirable to call the necessary meeting to pass special resolutions authorising such sub-division, and subsequently carrying them out."—Mr. BARGE seconded the motion, which was carried unanimously.

Mr. PARRY, in reply to Dr. SILVESTER, said that the lode had been found rich, but it was necessary to work it from below, and this they had been doing.

The meeting then closed with a vote of thanks to the Chairman, directors, and secretary.

#### THE NEW QUEBRADA MINING COMPANY.

The ordinary general meeting of shareholders was held at the Cannon-street Hotel yesterday.

The Hon P. C. BRUCE, M.P., in the chair.

Mr. M. G. BURCH (the secretary) read the notice convening the meeting.

The CHAIRMAN said that during the year under review the works had been pushed on with increased activity and with favourable results. The ore shipped to this country had increased from 8000 tons to about 14,000 tons, and had maintained pretty nearly the same assuage as to quality. In addition to keeping up this output, a considerable quantity of inferior ore had been placed on the floors ready for smelting when the works were completed. The managers had pushed forward the exploratory works and opened up the property for the future, yet the cost of wages and working showed but a small increase, being 16,240s., as against 15,978s. in 1879, in which year the output was much lower; in fact, the cost was 1s. 2d. in 1879, against 1s. 1d. in 1878. The directors expressed their satisfaction with the way in which the manager (Mr. Holman) and those under him in the mine performed their duty. It was impossible to exaggerate the importance of the proposed smelting operations, as they would be able to utilize the ore down to a very low grade indeed. The directors believed they would produce 3000 tons of regulus, which at present prices would leave a profit of something like 30,000s., or 40,000s. Referring to the contract with the Bolivar Railway, he pointed out that it had become necessary to make a fresh arrangement by which (for a period not exceeding 20 years from Jan. 1, 1881) the Quebrada Company secured, out of the first proceeds of these sales, the same allowances as agreed upon for the year 1880—40s. per long ton (22 cwt.) on ore, and 6s. per unit of copper in regulus. In addition to this, the Quebrada Company would participate in all net proceeds of sales above 50,000s. in any one year; up to 55,000s. will go to the Quebrada Company absolutely; above 55,000s. the surplus proceeds will be divided between the two companies equally. Referring to the proposed issue of new debentures, he stated that they were intended to consolidate the indebtedness of the company, and would be a first charge upon its undertaking.

He concluded by congratulating himself upon being the first Chairman of this company who was able to announce a dividend, and moved the adoption of the report and accounts.

Mr. MEAKS, the Deputy Chairman, seconded the resolution, and a discussion ensued. The report and accounts were then adopted, and a dividend of 2s. 6d. per share was declared. A resolution was passed authorising the issue of 100,000s. of debentures.

The CHAIRMAN said that more than half the debentures were already taken up, and advised the shareholders to apply quickly if they intended to participate in the allotment.

A detailed report will be published in next week's Mining Journal.

[For remainder of Meetings see this day's Supplement.]

#### Original Correspondence.

##### FLAGSTAFF MINING COMPANY.

SIR,—The calculations made by "New Flagstaff" in last week's Journal are based upon an uncertain result, which cannot, therefore, be reliably taken into account at present. I think the proper way of showing the difference between the two propositions is as follows: In the New Flagstaff Company an old Flagstaff shareholder investing 1l. obtains 1-80,000th part of the property, &c., and an old Flagstaff shareholder in the Resurrection Company for 1l. obtains 3-150,000 = 1-50,000, or 2 greater benefit in favour of the resurrection scheme, equal to 7s. 6d. in the 1l., whilst the old Flagstaff debentureholder gets no benefit whatever by the New Flagstaff scheme, but for 5s. gets 1l. or 1-150,000th part of the whole property and assets in the resurrection scheme.

"RESURRECTIONIST."

##### BWLCH UNITED MINES.

SIR,—In the Journal of July 10 your Correspondent "Traveller" gives some interesting particulars regarding these mines, in addition to corroborating the statements made by a "Recent Shareholder" in your previous issue. Will you kindly allow me to add my mite of testimony to the thorough and practical development which is being carried on at this property, and which might be advantageously followed by kindred undertakings, with happy results to their proprietary, and benefit to the county at large? I may here add that since your Correspondents visited the mines the completion of the dressing-floors has become an actual fact, and the trial of the extensive and powerful machinery passed off without a hitch. No one can judge of their great extent and power without a personal visit. I was also much struck with the manifest change in the strata sinking towards the 110, which in my opinion points to their nearing the great ore deposits found and worked upon deeper in the adjoining mine. Already a marked improvement has taken place in the 100, which in my opinion is more than likely to greatly enhance the value of this rich mineral property.

ANOTHER TRAVELLER.

London, July 23.

##### WEST VOR MINE.

SIR,—My attention has been strongly attracted by the striking character of a mine lately commenced working which adjoins the Great Wheal Vor Mine and now known as West Vor. The sett is extensive, and its situation is most favourable for the production of large masses of tin: it being bounded on the east by Great Vor Mine and being of the same geological composition, the lodes from which such vast returns were made passing through the entire length of this mine. Capt. Josiah Thomas, of Dolcoath, in a report on West Vor states that Great Vor was probably one of the most productive tin mines ever found in Cornwall. On the north it is bounded by Great Wheal, also one of the most successful of our Cornish tin mines, and, to add to its chances of success, is the junction of killas and granite which occurs in the sett. It has been highly reported on by the following eminent and practical mining authorities:—Capt. Josiah Thomas, Manager of Dolcoath Mine; Capt. S. Harris, Manager of Great Vor Mine; Capt. W. R. Rutter, Manager of West Seton, and other practical men of acknowledged authority. These reports can be obtained on application at the office of the company.

London, July 23.

T. HUNTER, Secretary.

[For remainder of Original Correspondence see this day's Supplement.]

THE ARUBA ISLAND GOLD MINING COMPANY.—At a special meeting of shareholders yesterday resolutions were passed relative to increasing the capital of the company. A full report will appear in next week's Journal.

NEW QUEBRADA COMPANY.—At the meeting yesterday of the New Quebrada Company a dividend of 2s. 6d. per share was declared. The report was of a favourable character. A full report will appear in next week's Journal.

EBERHARDT AND AURORA.—Work is being steadily prosecuted on the prospecting drift in the tunnel. The prospects are more than favourable, and, as Captain Drake remarked, "We can get assays out of some of the rock." It is perhaps a little significant that the captain is in usually good spirits.—A CORRESPONDENT.

RICHMOND.—(From a Correspondent).—Is it not a most unfavourable feature that a number of chlorides are at work on Adams's Hill taking out flux for the Richmond Company? Why are these men thus employed? Some of your mining readers will understand the significance of this inquiry.

ST. JUST UNITED.—Very rarely are the reports of former workers realised when a mine is re-started; but at the 120 ft. level in this mine, on Wednesday last, what is locally known as the "Cream Pot" was cut into, and certainly promises to quite equal the most

sanguine expectations. It is said that 10 tons of tin a month will at once be returned without difficulty.

#### SALES OF COPPER ORES.

##### COPPER ORES SOLD AT THE CORNWALL TICKETINGS, FOR THE QUARTER ENDED JUNE, 1880.

Mines.	Tons.	Amount.
Devon Great Consols	2269	6269 11 6
South Caradon	1455	6512 1 0
Mellaneur	1620	5448 6 6
West Tolgus	764	4345 11 6
Wheal Crebor	834	3645 5 0
Glasgow Caradon	470	1850 2 0
Marke Valley	620	1899 0 0
Gunnislake (Clitters)	324	1696 4 0
Levant	180	1410 9 0
West Seton	170	763 1 0
Bedford United	202	693 14 0
East Pool	232	508 4 0
South Devon United	380	1061 2 6
Wheal Eliza	65	312 0 0
Botallack	30	192 15 0
New Cook's Kitchen	42	192 3 0
Phenix	25	156 12 6
Gawton	47	108 12 0
Carn Brea	33	98 3 6
South Crofty	57	171 6 0
Wheal Bassett	19	63 7 6
South Condurrow	7	55 0 0
Killireth	5	16 7 6
Teague's Ore	6	23 5 0
Great Crinnis	20	79 0 0
North Trekerby	6	16 19 0
Wheal Harmony	15	32 12 6
West Basset	13	37 14 0

##### COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	2,120	£ 7,780 9 2
P. Grenfell and Sons	1,740	8,202 19 2
Nevill, Druce, and Co.	2,033	6,868 17 3
Williams, Foster, and Co.	2,376	8,765 15 8
Mason and Elkington	998	3,928 8 3
Charles Lambert and Co.	669	2,020 7 6
Total	9,936	£37,566 18 0

##### COPPER ORES SOLD AT THE SWANSEA TICKETINGS, FOR THE QUARTER ENDED JUNE, 1880.

Mines.	Tons.	Amount.
Cambrian	153	£1,469 3 0
Berehaven	189	814 16 0
Tan-y-Bwlch	71	441 19 8
Tigrony	14	186 18 0
Total	427	£ 2,912 16 8

Names.	Tons.	Amount.
Betts Cove	1912	£ 8,102 0 0
Copper Ore	106	691 0 0
Total	2018	£ 8,793 0 0

##### FOREIGN.

Names.	Tons.	Amount.
Caveira	1331	£ 6,731 14 6
Virneberg	432	3,501 0 0
Vignaes	259	2,867 0 0
Arendal	581	2,250 3 6
Sobral	116	1,137 4 6
Laque lo Abarca	128	1,605 1 0
Cuba Precipitate	35	810 16 0
Mostardeira	177	573 6 0
Bogalho	6	87 0 0
Total	3068	£19,563 5 6

##### RECAPITULATION.

Names.	Tons.	Amount.
British	427	£ 2,912 16 8
Colonial	2018	8,793 0 0
Foreign	3068	19,563 5 6
Sundries	7	191 8 0
Total	5520	£31,460 10 0

##### COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Copper Miners' Company	646	£ 3,339 6 3
P. Grenfell and Sons	648	2,829 11 0
Nevill, Druce, and Co.	294	2,956 7 6
Vivian and Sons	875	4,173 10 0
Williams, Foster, and Co.	1614	9,228 5 3
Mason and Elkington	570	3,098 15 0
Charles Lambert	143	1,303 1 0
Landore Copper Company	478	2,988 2 0
Cape Copper Company	246	1,008 12 0
Total	5520	£31,460 10 0

#### FOREIGN MINES.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, 655,000, from 1130 (P) tons of ore. Refinery, 855,000.

— R. Rickard, June 30: Since my last operations both in mine and smelting works have been carried on with usual regularity. The cross-cut from Lisette tunnel has been extended 7 ft. in hard limestone. The 200 west drift has been advanced 12 ft. in good-looking ground. The 200 north-west is in much more favourable ground for drifting than it has been for some time, and has been advanced 18 ft. The 400 north from No. 11 chamber has been extended 8 ft. in very hard ground. The 600 west drift has been advanced 12 ft.; ground more favourable. The 600 west from south fissure has been extended 11 ft., without any change to mention. The 800 on quartzite has been resumed and been drifted 13 ft. The 700 south from winze is not looking so favourable for ore; there is a well-defined fissure with some ledge matter; this drift has been extended 18 ft. The 800 west has been extended 14 ft.; ground more favourable for drifting. The 900 west has been advanced 4 ft. in very hard ground. The 900 north cross-cut has been extended 7 ft. without any change to mention. The chambers are all looking well, and turning out the usual quantity of good ore. The machinery both in mine and smelting works is all in good working order.

MISSOURI LEAD.—Telegram from the mines—Furnaces working well, plenty of ore.

ALMADA AND TIRITO CONSOLIDATED.—Telegram from Mr. Clernes, dated July 5: I have remitted you ores and bullion, \$1000.

DEVALA MOYAR (Gold).—Telegram from Mr. Brough Smyth relative to one of the estates lately acquired by this company:—Rhodes's Reef, Strathcarran Heaps: Quartz visible, gold immensely rich, big reef, water facilities.

— Telegram from Mr. Brough Smyth, dated Ootacamund, July 22: "Rhodes's reef gold showing freely, reef gold visible behind bungalow. Kintal reef gold, large workings jungle gold, Maryland side, large reef, Howard West gold assays will telegraph results. Pegler and Laing concur—prospects certain."

EBERHARDT AND AURORA.—Frank Drake: Progress report for eleven days ending June 26: Eberhardt and Aurora Tunnel: Distance run to May 1, 5455 ft.; run for eleven days ending June 26, 66 ft.; distance run to June 26, 5521 ft.; run for month of June, 70 ft.—Remarks: Since the resuming of the work in face of the tunnel there has been no material change in the character of the rock. The progress has been quite good. Total distance driven in the Consolidated ground is about 604 ft., leaving 196 ft. to be driven. I think we will be able to accomplish this by Aug. 1.

SANTA BARBARA (Gold).—Mr. Thomas Tregellas, Paris, June 16: During May 835 tons of mineral were stamped, producing 2763 oits. of gold, and 121 oits. obtained from the additional strakes, making a produce of 2884 oits. of gold, or equivalent to 3453 oits. per ton of stone stamped. In addition to this 82 oits. were obtained from the treatment of 162 tons of refuse stone, thus giving a total produce for the month of 2966 oits. of gold, which, valued at 8s. 6d. per oit., amounts to 1260l. 11s., and the estimated working cost for the month at exchange 21s. 4d. being 1151l. 1s. 5d., leaves an estimated profit of 1095l. 9s. 7d. for May. Mr. Tregellas, who remained during the month of May unable to actively superintend the operations at the mine, reports that the lode at stope No. 7 north maintains its size and quality; at stope No. 7 south the lode has yielded mineral of fair quality, and seems to be opening out a little; an improvement at this section may be looked forward to. At stope Nos. 5 and 6 south the lode continues disordered, and without any improvement. No. 1 shaft is still under suspension. Mr. W. H. Richards arrived at the mine on June 4. The mine captain reports as follows for May:—The quantity of ore raised during the month amounted to 1085 tons, of which 250 tons were rejected at the spalling floors as refuse stone, and 835 tons treated at the stamps. Average quantity of ore raised per ton for the month, 28.2 tons, or per horse power 0.503 ton.

RUBY AND DUNDEBERG.—Telegram from Eureka, dated July 20: The ore smelted during the week was 46 tons, and realised net about \$30½ per ton; also second-class ore realised \$580. The quantity of ore extracted during the week was 105 tons.

— Report for the week ending June 27: The north drift from the east cross-cut, on the 500 ft. level, has advanced 14 ft.; the ore has been somewhat smaller than per last report, but is widening out again, and the quality is first-class. No change in the stope above and east of the 500 ft. The ore body under the turntable on the 400 ft. continues to look well, and a considerable quantity of ore is being taken from it. The contract to run the 400 ft. south drift 100 ft. has been completed, and a new contract entered into with the same parties to continue it another 100 ft., reserving the right to stop them at any time we see fit, at the same rate—\$4 per foot. The west cross-cut from the 300 ft., in the direction of the Home Ticket west, has advanced about 5 ft.; this week the ground is very hard, with occasional bunches of low-grade ore. We have shipped 120 tons during the week. We have 25 men at work, besides four contractors and four tribute workers. Nothing else to report.

PITANGUI (Gold).—Advices from the mine, dated Pitangui, June 17, confirm Mr. T. S. Treloar's telegram, received June 8, giving the produce obtained for the month of May, 7075.8 oits., at 8s. 6d. per oit., 3077l. 4s. 3d.; less cost for the month (exclusive of 223l. 13s. expended on capital account), 851l. 19s. 10d.; leaving a profit for the month of May of 2425l. 4s. 5d. The above result is obtained from

the treatment of 175.5 tons of vein stuff. Mr. T. S. Treloar reports that the produce for the first half of June amounts to 2158.4 oits., which at 8s. 6d. per oit., gives the sum of 317l. 8s., which is less than the corresponding half of May, owing to the Ouro Podre shoot becoming slightly disordered. The large clay vein and the small one in the rise form a junction, and just at this point the underlie of the ground has suddenly changed, becoming stiffer, and the clay at the same time getting much mixed with iron and quartz, and proving less productive than hitherto; such changes in jactating mines are not unfrequent. We have, however, cut into this shoot at the horizon of the 20 ft. level, and find it here maintaining its size, underlying flatter, and not so disturbed as it is at present in the bottom of our stope above, although the samples are not so rich as we have been having. No uneasiness should be felt that the gold will become exhausted in descending, seeing that the No. 1 side level, off the adit going to the Ouro Podre ground, intersected auriferous veins. The drawback to us here is having only one shoot to work upon, but we are in good hopes that ere long the Francisco Antonio, Jose Candido, and surrounding veins, as well as the Bahu, will become available. With the exception of the change in the Ouro Podre section there is nothing in the mine calling for notice. The various works of the establishment are being prosecuted vigorously.

CONNOLLY.—John Potter, June 28: The hoisting engine was started upon the 23rd, and has been kept running day shift since. We have shipped to the smelters up to date 51 tons of ore from the 330 ft.; commence hoisting from the 430 ft. to-morrow morning.—Upper Works: The ore broken in these works has been brought down in the dump, and will be shipped to-morrow.—East Winze: A few tons of good ore have been taken from this winze, which is now being assorted; this with the balance will be sampled in a day or two. The prospect of the continuity of the ore vein to the north-west is promising favourably. Work will be resumed in the course of a few days. To-day the ore shipped from the 330 ft. level has been sampled. The ore breast is looking much better than it did when we started in work, and a better grade is looked for as the deposit is run on. Some very nice quartz has been broken in the 430 ft. level during the week. The uprise has been continued on the ledge 12 ft. on a 2-ft. vein of ore.

ISABELLE (Gold and Silver).—Foreman's weekly report ending June 27: Advance made, 73 ft.; total distance from mouth, 2943 ft.; from Monument, 3015 ft. The formation has been quite favourable for making tunnel. Everything in good order, and nothing unusual to report.—Foreman's monthly report for June, 1880: Advance made during the month, 284 ft.; total distance from mouth, 2983 ft.; from Monument, 3061 ft. Work was suspended at the heading five shifts during the early part of the month for the purpose of securing the ground by timbers. Since that time the formation has been moderately favourable for making tunnel. A 3-in. stream of water was struck at a point 2850 ft. from the mouth coming in from the north. Eight sets of timber were placed in position during the month. Everything is in good order and working smoothly.

SOUTH-EAST WYNAAD ESTATES AND GOLD MINING COMPANY.—Oliver Pegler says—Went also to Richmond and ran over the principal reefs of the main tunnel, and were astonished at the grand character of the veins, some being, as Capt. Roberts says, fathom wide, and also present appearances of being auriferous and highly promising. There are large extents of native mining operations and alluvial washing, which point undoubtedly to the auriferous character of the stone, and if our preliminary prospecting is successful great results must be expected, as there are great quantities of quartz sufficient for the employment of many stamp heads, and a large daily output sufficient indeed for more than one company. I am going to have the quartz broken in two places at least here, and commencement for two tunnels will be made immediately.

SENTINEL.—July 10: The manager reports as follows:—St. Barbe has been extended 15 ft. No material change in the lode. No. 4 end has a little improved since last week, worth 3½ tons of carbonate of lead per fathom. We have not driven this level much in consequence of the air being still a little foul. In the winze sinking below this level the lode is very rich for mineral. The stope is fully as productive as ever. We have broken 300 tons, and have brought down to the Board 342 tons of ore of silver-lead and zinc. Wire-rope, dressing machinery, &c., going well.

July 17: The manager reports as follows:—During the present week we have broken at the mines 300 tons of silver-lead (galena), carbonate of lead, and zinc ores, and have transported to the Board 300 tons. There is no perceptible difference in the value of our stope and ends since last reported on. No. 4 end has been extended 7 ft. in a lode composed of carbonate of lead and gossan, worth 3 tons of carbonate of lead per fathom. The winze sinking below No. 4 level has been put down 6 ft. The lode is worth 60 tons of lead and blende per fathom for length, 16 ft., and width 10 ft. St. Barbe has been driven 9 ft.; the lode has become a little harder, and is looking more kindly. Wire-rope and dressing machinery working well.

CONSOLIDATED.—Frank Drake, June 28: I beg to acknowledge receipt of yours of May 26. I note your remarks in reference to the prospecting of your ground by hand drilling. You may have been surprised when you learned that all my tunnel force of men and machinery have been at work prospecting on your property. I can assure you that the same amount of work could not have been done by hand drilling as cheaply; your property is now in a condition to be worked either by hand or machinery without interfering with the progress of the main tunnel. It is the order from the Eberhardt and Aurora Company that I should go on driving the tunnel, so on the 14th inst. I suspended the prospecting of your ground, and placed the entire force at work in the face of tunnel. When I commenced your prospecting it was not my intention to do so large an amount of work with the machinery, but as I continued on I found the prospects so favourable that it looked as though good ore would be found at any day. The suspension of the work by machinery was not on account of an unfavourable outlook to get ore, but to stop the heavy expense upon your company. I am pleased to be able to say that the prospects are still encouraging, and it is my intention to resume the work by hand drilling as soon as you forward remittance to enable me to pay off the balance for work already done, and sufficient for monthly expenses. To continue this work by hand I estimate that the monthly expenses will not exceed \$1500. We have some ore in the back of one of the drifts, and I think it advisable to start an upraise upon this ore and follow it until it either enlarges into a body of ore or leaves us entirely. Since my last tunnel progress sheet was forwarded to you the main tunnel has been advanced 68 ft., making a total distance driven in your ground of 604 ft. There now remains 196 ft. to be driven to reach your northern boundary line.

PIERREFITTE.—The manager reports as follows:—With respect to underground operations we are still raising considerable quantities of ore, which is accumulating both in the mine and on the surface. We shall have another parcel of lead ore ready for the market in a comparatively short time. The yielding qualities of the lode in the different stope are quite up to former reports upon the whole. Good progress is being made in driving the No. 2 level. This is a very important point, as this end will drain the No. 1 level, and form a convenient outlet for the ore raised above it, to say nothing of the discovery in it. We are pushing on all operations as fast as we can. A telegram just received says:—"We have struck ore in No. 2 level—good discovery."

#### LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
July 21—	Pant-y-Mwyn	20	£ 9 19 0	Walker, Parker, and Co.
—	Roman Gravel	150	9 15 6	ditto
—	ditto	30	10 3 6	Adam Eytton.
—	ditto	50	9 16 0	J. H. Moore.
—	Van	40	11 6 6	Walker, Parker, and Co.
—	ditto	80	11 8 0	Panther Lead Co.
—	ditto	40	11 8 0	Weston, Son, and Co.
—	ditto	40	11 11 6	J. Walton and Co.

#### BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
July 14—	Pierrefitte	100	£ 2 15 6	Rickard Brothers.
—	Van	125	2 9 6	Vivian and Sons.
—	ditto	25	2 9 6	Dillwyn and Co.

#### COPPER ORES.

Sampled July 7, and sold at the Royal Hotel, Truro, July 22.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols.	107	£2 4 6	Gunnislake (Clitters).	66	£5 16 0
ditto	106	2 1 6	ditto	57	5 10 0
ditto	105	2 7 0	Marke Valley	70	2 15 6
ditto	98	2 5 0	ditto	66	2 9 6
ditto	94	2 2 6	ditto	62	3 12 0
ditto	87	2 5 0	ditto	30	2 4 0
ditto	85	4 18 0	ditto	34	2 3 6
ditto	78	5 14 0	Glasgow Caradon	60	3 1 6
ditto	8	11 10 0	ditto	52	5 0 6
South Caradon	99	3 3 6	ditto	48	4 7 6
ditto	98	2 16 6	South Devon United.	54	1 9 6
ditto	58	3 0 0	ditto	34	1 16 0
ditto	50	4 1 6	ditto	24	3 11 6
ditto	43	3 8	ditto	34	5 9 6
ditto	40	2 16 6	ditto	21	3 3 0
ditto	40	8 0 0	Bedford United	55	3 0 6
Gunnislake (Clitters).	91	6 1 6	Phenix	35	4 14 0
ditto	84	5 1 0			



BRITISH MINES.

past, and our powder magazine is now also finished, as well as most of our sheds on the floors, &c. Dressing proceeding with regularity.

**FORTESCUE (Stannagwyn).**—J. H. James, H. Harris, July 21: Our stamping apparatus is now completed, engine in working order, and contractors are busy

ft. 10 in.; the lode is 4 ft. wide, and yielding fully 4 tons of ore per fathom. The 60, west of shaft, on the main lode, was driven 4 fms. 2 ft. 2 in.; the lode is 2 ft. wide, yielding good stones of copper ore and blende, and looking very promising. The 70, driving south-east, west of shaft, was driven 2 fms. 3 ft. 4 in.; the lode is 3 ft. wide, and yielding  $\frac{1}{2}$  ton of ore per fathom. The 80, driving north-west, west of shaft, was driven 2 fms. 4 ft. 10 in.; the lode is 8 ft. wide and yielding little saving work for copper ore and blende, but still split up and disordered. The 80, west of shaft, on main lode, was driven 2 fms. 4 ft.; the lode is 3 ft. wide, and yielding 2 tons of ore per fathom. The 90, west of shaft, was driven 2 fms. 5 ft. 4 in.; the lode is 4 ft. wide, and yielding 1 ton of ore per fathom. The 100, west of shaft, was driven 2 fms. 4 ft. 10 in.; the lode is 3 ft. wide, and yielding  $\frac{1}{2}$  ton of ore per fathom. The 110, west of shaft, was driven 3 fms.; the lode is 4 ft. wide, and yielding saving work for copper ore.

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3 fms. 1 ft. 8 in., or, at least 60 fms. of which has been in almost a continuous horizontal deposit of ore, varying in value from 3 to 6 tons per fathom. The vein here for the last nine days is continually improving, the lower part of which to-day is upwards of 2 ft. wide, carrying a solid layer of pure galena 22 in. wide, worth fully 5 tons per fathom. Other points looking well. We shall weigh off to-morrow the produce in pig-lead of 30 tons of lead ore, and shall have other 30 tons dressed by the end of this month.

**WEST VOR.**—S. Harris, July 22: I have been underground this morning, and find the men have broken some of the lode, from which I took samples, and found them to produce tin. The lode is 4 ft. wide, and improving in its nature, as well as producing tin, in a workable lode.

**WEST WHEAL TOLGUIS.**—July 22: In the 155, west of shaft, the lode is 3 ft. wide, and yielding  $\frac{1}{2}$  ton of copper ore per fathom. In the 25 east, on the south part of lode, the lode is 2 ft. wide, yielding 1 ton of ore per fathom. In the 135, west of shaft, the lode is 2 ft. wide, but unproductive. In a stope in back of the 155, west of shaft, and east of No. 3 winze, the lode is  $2\frac{1}{2}$  ft. wide, and yielding 2 tons of ore per fathom; worth 10, 10s. per fathom. Stope in the back of the 155, west of shaft, and east of No. 3 winze, the lode is 3 ft. wide, and yielding 2 tons of ore per fathom; worth 10, 10s. per fathom. Stope in back of the 155 west of shaft, and west of No. 3 winze, lode  $1\frac{1}{2}$  ft. wide, yielding  $1\frac{1}{2}$  ton of ore per fathom; worth 7, 10s. per fathom. Stope in the back of the 155 west of shaft, and west of No. 2 winze, the lode is 3 ft. wide, yielding 3 tons of ore per fathom; worth 15s. 15s. per fathom. Stope in bottom of 145 west of shaft, and east of No. 1 winze, the lode is 4 ft. wide, yielding  $3\frac{1}{2}$  tons of ore per fathom; worth 17, 10s. per fathom. Stope in back of the 125, west of shaft, on the south lode, the lode is 4 ft. wide, yielding 3 tons of ore per fathom; worth 15s. 15s. per fathom. No. 4 stope in back of the 125, west of shaft, on the south lode, the lode is 3 ft. wide, yielding  $2\frac{1}{2}$  tons of ore per fathom; worth 13, 10s. per fathom. Stope in bottom of the 125, west of shaft, on the south lode, the lode is 5 ft. wide, yielding 2 tons of ore per fathom; worth 10, 10s. per fathom.—**Richard's Shaft.** The lode in the 105, west of shaft, is 2 ft. wide, and yielding good stones of copper ore. In the 95, west of shaft, the lode is 4 ft. wide, yielding  $2\frac{1}{2}$  tons of ore per fathom, and looking promising for an improvement. No. 2 rise, in the back of the 95, west of shaft, the lode is  $3\frac{1}{2}$  ft. wide, and yielding 3 tons of ore per fathom. In the 85, west of shaft, the lode is  $2\frac{1}{2}$  ft. wide, and yielding  $\frac{1}{2}$  ton of ore per fathom. In the 65 cross-cut, south-west of shaft, we have not intersected anything to value. Stope in back of the 35 west of shaft, and west of No. 1 rise, the lode is 4 ft. wide, yielding  $2\frac{1}{2}$  tons of ore per fathom; worth 13, 10s. per fathom. No. 1 rise in the back of the 95 is suspended waiting for the 83 to communicate.

**WHEAL COATES UNITED.**—W. H. Martin, July 20: The shaftmen are closing up the preliminary work, and the latter part of the week we shall resume the drive at the 80. The winze sinking below the 70, west of shaft, is worth for tin 10l. per fathom. The 70 west end is worth for tin 10l. 10s. per fathom. The 70 east end is worth for tin 8l. per fathom. We hope to communicate the rise in the 70 to the 70 east, the winze sinking below the 50 by the end of the month, which will open up a large cross-cut in the 70, and the 70 east end is worth for tin 8l. per fathom. We purpose to stop this end for awhile, and put these men to sink a winze close to the end to communicate with the 70 to open up profitable tin ground, and will ventilate the 70 west. At surface we are fixing stands and runners to carry the wire-rope from the winding-engine to the skip-road. Last week we put in a new oven to the burning-house—in fact, we have had to replace most of the dressing-floors connections, during the twelve months being idle everything went to decay, however we have accomplished the greater part of the surface work, and we hope in a shorter time to be in a regular course of working both underground and at surface.

**WHEAL CREBOR.**—G. Rowe, H. Phillips, July 20: The lode in the 120 west of cross-cut is improving, worth 20l. per fathom. The lode in the 120 east is also improving, worth 30l. per fathom. The lode in the stope in the back of the 120 east is worth 40l. per fathom. The stope in the back of the same level west of winze is worth 40l. per fathom. The lode in the 103 east is producing stones of ore, and showing a kindly appearance. The 113 east on the south part of the lode is looking exceedingly well, worth 35l. per fathom. The lode in the stope in the back of this level (103) is worth 30l. per fathom. No. 2 stope in back of the same level (103) is worth 30l. per fathom. All other points are without change.

**WHEAL GRENVILLE.**—T. Hodge, July 21: No perceptible change has taken place in the bargains during the past week, and if I were to value the bargains again I should only be going over the same ground. Gould's shaft is going down with fair speed.

**WHEAL JANE.**—R. Southey, July 22: Since my last report we have completed the erection of a new calining oven which was ordered at the last general meeting of the shareholders; this will enable us to clean the tin better, so that a better price may be got for it. The ground in the south cross-cut is full of branches, but the lode is not yet met with end; driving by four men, at 5l. per fathom. We have commenced to drive west at the deep adit level, under the course of tin gone down in the bottom of the shallow adit at Wheal Tremayne; this will lay open a large section of profitable tin ground. I am pleased to say all operations are progressing satisfactorily, and the tin coming out quite up to expectations.

**WHEAL REFREUSIAN.**—W. Tregay, July 22: In the shaft east of the old men's shallow working, known in former times as the Golden Calf, we have broken some rich tin within 10 fms. from the surface. The tin ground above this point having been all taken away, leaving that below apparently unwrought, our energies must be directed to getting the shaft 10 or 15 fms. deeper as quickly as possible, where we expect a good paying lode.

**WHEAL UNY.**—Wm. Rich, Matthew Rogers, jun., July 21: We have completed the skip-road in the incline shaft from the 150 to the 172. The lode in the 172 end west is worth 8l. per fathom. We have set men stopping the lode behind the 150 end, to bring an favourable vein. The lode in the 150 west is worth 7l. per fathom. The 160 west is worth 10l. per fathom. The rise in the back of this level is worth 9l. per fathom. We have fully cut through the lode in the 161 cross-cut north, and are now engaged opening out east and west to prove its value.

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## THE WEEK.

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**SATURDAY, JULY 17.**—A large business was again done in Spanish Bonds, and vague rumours were in circulation that the rate of interest may probably be raised. It is more probable, however, that the buying has proceeded from large financial houses, who in the present plethora of money and the dearth of good investments, are anxious to get their money invested in the best price return over 5 per cent. To-day they were dealt in at 19 $\frac{1}{2}$ %, no such price having been reached since 1876. A moderate recovery, ranging from  $\frac{1}{4}$  to  $\frac{1}{2}$  per cent., was shown in Trunks. Home railways were featureless.

**MONDAY.**—Spanish touched 18 $\frac{1}{2}$ %, but the principal dealings in foreign bonds was in Egyptians. Daria Khassa advanced 4 $\frac{1}{2}$ %, from 74 $\frac{1}{2}$ % to 79%. In Daria Sanieh the improvement was limited to 1. Trunks were largely bought, and managed to maintain the highest points reached. Business was done in the First Preference at 20, and the Third at 39 $\frac{1}{2}$ %. The ordinary rose to 21, Second Preference to 79 and the Third 39 $\frac{1}{2}$ %. Brighton A, was at one time an active market at 163, but finished finally at 162 $\frac{1}{2}$ % to 162 $\frac{1}{2}$ %.

**TUESDAY.**—Sales were made of Egyptian Unified and the State Domain. The latter was dealt in at 91 $\frac{1}{2}$ %, though recently as high as 97. Unified receded to 61 $\frac{1}{2}$ %, the fixing of the interest at 4 per cent. being viewed with disappointment. In home railways business was exceedingly quiet, no change exceeding  $\frac{1}{2}$  per cent. The holidays are now beginning to make their usual effect. A strong rally in pig-iron was disregarded. Almaden,  $\frac{3}{4}$ % to  $\frac{1}{2}$ %; Dou Dore,  $\frac{3}{4}$ % to  $\frac{1}{2}$ %; Indian Glenrock,  $\frac{1}{4}$ % to  $\frac{1}{2}$ %; Richmond, 15 $\frac{1}{2}$ % to 16; Ruby, 7 to 7 $\frac{1}{2}$ %.

**WEDNESDAY.** Unified receded to 61 $\frac{1}{2}$ %, large amounts changing hands even at 61 $\frac{1}{2}$ %. The Brighton Railway meeting was held to-day, the Chairman warning the shareholders not to indulge in too sanguine expectations for the future. The last price of the stock was 162, having fallen  $\frac{1}{2}$ % per cent. All the various Grand Trunk issues closed  $\frac{1}{2}$ % lower. Mining shares showed weakness. Tankerville was dealt in at 3 $\frac{1}{2}$ %, and East Caradon at 1 $\frac{1}{2}$ %; South Frances were quoted 1 lower, Glenrock receded to 14, and South-East Wymore to 2 $\frac{1}{2}$ %.

**THURSDAY.**—According to the report of the Directors of the United States Cable Company, the balance of the past six months amounted to £2,149 $\frac{1}{2}$ l., leaving a net balance of nearly 60,000 $\frac{1}{2}$ l.; 5 per cent. for the year has been paid, leaving over 21,000 $\frac{1}{2}$ l. to be carried forward. The London and Westminster Bank announce that after paying 8 per cent. the rest or surplus fund will be 1,037,870 $\frac{1}{2}$ l. Although the Trunk traffic showed an increase of over 10,000 prices would not go up, but declined eventually after remaining stationary the greater part of the day.

**FRIDAY (Opening).**—The South-Western dividend is announced as one of 4 $\frac{1}{2}$ % per cent., and the Caledonian dividend is looked for shortly. Both the foreign and home railways are quiet. Unified has fallen to 60 $\frac{1}{2}$ %, and Trunks are offered to 10. Dover is quoted  $\frac{1}{4}$ % lower—133 $\frac{1}{2}$ % to 133 $\frac{1}{2}$ %. North-Eastern, 163 $\frac{1}{2}$ % to 164; Sheffield, 63 $\frac{1}{2}$ % to 63 $\frac{1}{2}$ %; Caledonian, 110 $\frac{1}{2}$ % to 111; Great Eastern, 61 to 61 $\frac{1}{2}$ %. Trunk Seconds remain 75 to 75 $\frac{1}{2}$ %, and the Thirds 38 $\frac{1}{2}$ % to 38 $\frac{1}{2}$ %. Parys Corporation, 20s. to 25s.; Wheal Crebor, 5s. to 8; Ruby, 3 $\frac{1}{2}$ % to 7. Brighton, A, stock is offered at 161 $\frac{1}{2}$ %.—*Two o'clock.*—Railways are all better, on re-purchases, the principal recovery being in Berwick, now quoted 164 $\frac{1}{2}$ % to 165 $\frac{1}{2}$ %, Brighton, A, being 161 $\frac{1}{2}$ % to 162, and Sheffield, A, 63 $\frac{1}{2}$ % to 64. Trunks are rather weak, the ordinary being now bid 20 $\frac{1}{2}$ % to 20 $\frac{1}{2}$ %, and the Thirds 38 $\frac{1}{2}$ % to 38 $\frac{1}{2}$ %. Just a year ago the price was 100 and 106. Cape Copper, 41 to 41 $\frac{1}{2}$ %; Nouveau Monde, 10 to 10 $\frac{1}{2}$ %; Pamlico, 4 $\frac{1}{2}$ % to 4 $\frac{1}{2}$ %; Rio Tinto, 12 $\frac{1}{2}$ % to 13.—*Four o'clock.*—The recovery in railways has made further progress, Berwick being now 165<



Ruby and Dunderberg,  $\frac{5}{8}$  to  $\frac{7}{8}$ ; latest advices state that satisfactory work continues to be done in the Dunderberg Mine, and the drift to the great Home Ticket lode is being steadily advanced. This week's returns show an increase of 25 tons over last week's, and the quality is reported as very good. It is said that work is to be recommenced in the El Dorado lode, which has been abandoned for some time, as encouraging, and rich ore is exposed. Last week's telegram should have read: "Ore extracted 80 (not 30) tons."

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### Notices to Correspondents.

\* \* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

MANGANESE—"H." (City).—The principal purchasers of manganese are the chemical manufacturers of Newcastle-on-Tyne, Glasgow, &c., but it is not probable that if offered at a low price a good market could also be found among iron manufacturers, especially in the Cleveland district.

Received—"H. C. J." (Brockville)—"H. S." (Colorado): The Mineral Point Tunnel Company—"R. E. L."—"F. S."—"A. G."—"J. H. H."—"A. R."—"C. C."—"J. L."—"Shareholder" (Devon Great Consols)—"W. P." (Liskeard)—"S. B."—"E. W. C."—"A. T." (Harberton)—"Shareholder" (Pioneer)—"Constant Reader" (Leds): The meeting will be held on July 30—"Nemo"—"Investor" (Low-priced Shares)—"An Old Indian"—"One Interested" (Paris): We shall be glad to receive the particulars.

## THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, JULY 24, 1880.

### THE EXPLOSION AT THE RISCA COLLIERY.

Another serious explosion, involving a heavy loss of life, has to be added to the calendar of mining disasters which has rendered South Wales so notorious of late years. The old scenes of wailing and distress are again repeated, and another public appeal for subscriptions has had to be made for the support of the widows and orphans. The experience of the past does not appear to have added to our scientific knowledge as to the prevention of such catastrophes in our mines. It has been laid down as a primary proposition that explosions of inflammable gas are directly traceable to inadequate ventilation, the use of naked lights, or defective safety-lamps, so that nearly all such catastrophes are really preventable. This to a great extent is correct, the only other means by which an explosion can take place being by a sudden outburst of gas, which appears to be nearly confined to the southern portion of the West Riding of Yorkshire, and there is no record of any having taken place in South Wales, for the probability is that the generation of gas in the floor of some mines is characteristic of peculiar localities and stratifications. It may, therefore, be assumed that, so far as the Risca Colliery is concerned, there was a large accumulation of gas that came in contact with a naked light, and so led to the explosion which resulted in the death of 120 men. But we are told that the colliery was considered one of the safest and best managed in the district; that the ventilation by means of a powerful fan was more than was really required, for the working places and the roads were cooler than is usually the case, while safety-lamps were in use, except at the bottom of the downcast shaft. Still there was an explosion. It has been suggested that it was caused by the lightning, which was very vivid in the locality at the time, but this may be dismissed as untenable, so that we must look to some other agent for the destruction of so many lives. In doing so it must be admitted that there was a large accumulation of gas in the immediate neighbourhood of the upcast shaft, as well as in other parts of the colliery, and that the quantity of air passing along was not sufficient to neutralise and render it harmless. The air and the gas formed an explosive mixture, and ignited at a naked light of some sort or other. Such are the simple facts that must be admitted, and it is, therefore, evident that the first General Rule of the Mines Regulation Act, which requires that there shall be an adequate amount of ventilation in all parts of the mine, such as to dilute and render harmless all gases, was not complied with.

As to the rule alluded to we may here state that by many persons it is not considered sufficiently clear, and Mr. WALES, the Government Inspector for South Wales, in the report just issued states that when the measure of 1872 was being discussed in Parliament he considered the words in the First General Rule were not sufficiently explanatory, and experience had since shown that they were either misunderstood or disregarded, and he suggested to the Minister of that day who introduced the measure certain alterations and additions, to the following effect, that an "adequate amount of ventilation should not only be constantly produced but should also circulate through every working place." This wording of the clause Mr. WALES states, speaking of his own district in particular, would have been the means of saving many lives. This is certainly somewhat startling, and shows that the rule which has been long considered the most important in the Act of 1872 is really not of the value as regards ventilation it has hitherto been considered. But he goes further, and says where emissions of gas are now discovered the air is made to circulate where it is found, and Mr. WALES very pertinently asks why should not the same be done before the danger reveals itself rather than wait until the sad fact of an accident has rendered the provision necessary. Danger signals and the fencing off certain places in the mine do not "dilute and render harmless" accumulations of gas. These precautions, Mr. WALES further states, are often little or no better than mantraps for the ignorant and careless workmen, and very rarely, if ever, except under certain conditions of the mine, can they for any definite period be relied upon, so that the sooner the ambiguity of the First General Rule in relation to the matter is removed, and suitable language to convey the true intent and proper meaning of the word *ventilation* is substituted, the better. We have here the key to some of the explosions that have taken place in South Wales, and that from the very highest authority. Ventilation, it may be said, can only be considered efficient when it sweeps through every corner of a mine, and this most certainly could not have been the case at Risca. It may have been strong at the bottom of the shaft and along some of the roads, but it must have been weak at some point to allow of a sufficient accumulation of gas to become explosive.

There is also another matter which should not be overlooked in noticing the explosion, and that is that shifts were worked with a displacement of 1000 tons of coal daily. Now, the constant working of a mine where there is a large get of coal not only liberates a proportionately large quantity of gas, but as miners say does not give time for the mine to get cool, whilst the breathing of the workmen and the horses gives vent in the midst of the mass of an excess of nitrogen, which if it does not influence the animal economy at least renders the air unfit for the maintenance of lamps and life, whilst the carburetted hydrogen or fire damp escapes most largely when the atmospheric pressure is slight, whilst if that augments it may happen that the escape of the gas will cease altogether. This shows the necessity that existed for the ventilation of such a mine as Risca, where the seam being worked gives off a good deal of gas being thoroughly ventilated, whilst it would also have been safer to have had the working places examined after each shift, as is the case at the mines which are only worked eight or nine hours out of the 24. We are told that one of the lamps was found to be broken as if struck by a pick. This of course would have made the light an open one, and in coming in contact with a heavy body of gas would have led to the explosion, or it might be that a match was struck, and that of course would have the same effect. But one thing is certain, that there was an accumulation of gas that was not sufficiently rendered harmless by the quantity of air that was sent through the workings, as should have been the case, and this should not have been so difficult with the powerful fan at the colliery, for by that system mine managers have obtained a better knowledge of the principles of ventilation and the advantages gained by splitting the air currents, increasing the extent of the air ways, and so reducing friction by diminishing the velocity and length of currents. Everything we are told was done at Risca to prevent a catastrophe such as has taken place, and the men were fully aware of the gaseous nature of the seam of coal being worked. But despite all the precautions that were taken and the knowledge of the workmen that large quantities of gas were given off the explosion took place, and in an instant

everything living in the mine was destroyed. But as we have before stated there can be but one cause for the explosion—the large body of gas coming in contact with a naked light. How the light became exposed is not likely to be made known, seeing that those who could have given any information with respect to it are amongst the stricken. We may, however, in the course of the enquiry that will follow be made acquainted with something as yet unknown with respect to the ventilation. We are informed that some of the workmen examined the workings once a month ago, and on the last occasion their report was as favourable as could be. But this does not say much, for a day or two makes a great deal of difference in a mine, more particularly in a fiery one. We have, however, in the explosion at Risca the fact brought home to us most irresistibly that the resources of science and the many so-called skilful appliances in use in our coal mines at the present time places us in but little better position for the prevention of such catastrophes than we were 20 or 30 years ago.

### SUDDEN OUTBURST OF GAS IN MINES.

The cause of sudden outbursts of gas in mines has puzzled our ablest mining engineers, whilst the great danger from them is fully recognised. Any information, however, with respect to their probable cause must, therefore, be of interest. The late President of the Midland Association of Mining Engineers states that there are two causes that would tend to an outburst of gas. One is the pressure of the coal upon the floor caused by the roof pressing upon the coal in the first instance, and the other that the pressure of the existing gas in the roof and the floor has sufficient power after the former operation has taken place to find an exit for itself. None of the outbursts of which particulars have been given had any connection with the goaf as a receptacle for gas, but were quite independent of it. There was no pressure that could be applied to the floor of the goaf by any fall that could take place that would cause gas that was in the goaf to pass into the floor. Were a certain amount of pressure applied from the roof to the floor that pressure, if sufficient, would cause a fracture to the floor, but it was not necessary that the fracture should extend to the roof. Another mining engineer informs us that we need not be surprised so much at outbursts of gas from the floor, for there was no great mystery about them.

On removing the coal a certain amount of pressure—an immense pressure—was taken off, and such a proceeding had a tendency to allow the floor, especially if it was a soft one, to lift, and what gas there was beneath would have a tendency to expand itself, and acquiring force would eventually burst through. In almost all cases outbursts did not occur unless the floor was ripped up or rent asunder for a considerable distance along the open face, and some of the fissures extended to a considerable length. As to fissures being produced, props at times are ripped right through, but there has not been a corresponding fissure in the roof. The roof may remain as it was before the occurrence of the outburst, or it may break, but it does not follow because a fissure was produced in the floor that there should also be a similar fissure in the roof. It was not simply the pack pressing on the floor, for the floor had a tendency to lift independent of any gas. In all probability the gas that issues from the floor of mines suddenly comes from the decomposition of carbonaceous matter. There was gas of an enormous power under our feet, and it did not necessarily follow that when there was an outburst from the floor that the roof should show any signs of it, for gas exists below independent of the roof. In working coal the pressure of gas underneath forces up the floor, and as more coal was taken away it escaped with tremendous force at the weakest point which was next the face. Gas that was originally in the coal escapes from it and enters into cavities in the strata, where it remains at an enormous pressure, but as soon as that pressure is removed the gas goes away.

Mr. MILLER, a well-known mining engineer, gives it as his opinion that some of the great explosions that have taken place in South Yorkshire occurred from sudden outbursts of gas from the floor of the coal. The above appear to be the only opinions that have been given as regards the cause of sudden outbursts of gas, but as the matter has been placed before the Royal Commission on Mines it is probable that in the report something will be said with respect to them although none of the members are in any way acquainted with them further than the details furnished at the instance of the Midland Institute of Engineers. The subject, however, is a most interesting and important one.

### THE EXAMINATIONS FOR CERTIFICATES AS MINE MANAGERS.

In his report Mr. DICKINSON calls attention to the want of uniformity in the examination of candidates seeking certificates of competency as managers of mines. In some examinations the qualifications required are comparatively easy, whilst in others they are just the reverse. Candidates soon learn which is the easiest district to go to, so that so long as that is the case we are not likely to have so able a body of mine managers as could be desired. Mr. MASKELL PEACE, of Wigan, to do away with this anomalous state of things, has prepared a summary of the instructions in the various districts. In some instances it is required that the candidate must have had three years' experience in a colliery, in others five years' practical experience in a coal mine, with a fair elementary education. In some instances the candidates are required to have a general knowledge of pumping, mode of sinking, working timbering, bratticing, ventilation, and the nature and properties of gases. In South Durham the examination includes the nature and properties of gases such as are found in mines, and how their presence can be ascertained, and what precautions should be taken to prevent their accumulation, or as to their removal when they do accumulate; also how the quantity of air in any air-way can be ascertained, also as to surveying, strength of materials, properties of steam and water, planning and surveying of colliery workings, with practical mining, including principles of ventilation, sinking, working, timbering, bratticing, boring on approaching old workings; also machinery and boilers in general use at collieries.

Such an examination appears to be most thorough, more so than in any other district, and must produce managers of a high standard. In Lancashire the requirements are briefly laid down. They are—the knowledge necessary for the practical working of collieries and other mines in Lancashire and North Wales, including the provisions of the Mines Regulation Act of 1872, with a practical treatise on the gases met with in coal mines, by Mr. J. J. ATKINSON. In Yorkshire a knowledge of machinery, ventilation, the use of instruments for dialling—by both the fast and loose needle—surveying and levelling, practical mechanics, plotting surveys, and in arithmetic, fractions, decimal fractions, and extraction of square and cube roots; together with the working and winning of mines, with a knowledge of gases. In South Staffordshire the examination is *à la carte*, and the subjects are by no means numerous or difficult. They are—1. Elementary chemistry confined to the gases of the mine in all its practical bearings.—2. General knowledge of machinery as applied to colliery purposes.—3. Arithmetic, surveying, sinking pits, and laying out a colliery under varied circumstances.—4. Underground management, ventilation, and timbering. The Derbyshire examination includes elementary chemistry, the winning and working of mines of coal, ironstone, and shale. In Monmouthshire, &c., the subjects are only few, and a certain number of marks has to be obtained. They are—Arithmetic, 40; ventilation, 85; practical mining, 70; engineering, 55; and surveying 50—making a total of 300. This appears to be about the simplest of any of the examinations. South Wales does not require so much as some other districts, the subjects being writing, spelling, geology of the South Wales coal field, arithmetic, knowledge of the Mines Act, 1872, with special rules of the district, the working and winning of mines of coal, stratified ironstone, and fire-clay, practice and theory of ventilation, practical knowledge of the machinery and boilers generally in use at collieries, and underground surveying. In the East Scotland district matters are different, and the subjects are more diversified, and consist of—general knowledge of the Coal Mines Regulation Act and of theoretical and practical ventilation, with modes of working coal having reference

to the nature of roofs and pavements; sinking, fitting, and pumping with theory of the steam-engine; winding, haulage, and strength of materials; underground surveying and drawing, and arithmetic applied to fractions, with calculations of areas and velocities. On each of those subjects a certain number of marks has to be obtained. In West Scotland the subjects are similar, and marks have also to be obtained.

From the above statement it will be seen that there is a material difference in the examinations in the various districts, and what is really wanted is uniformity, so that a candidate need not go from the county in which he is residing into another one where the subjects are much easier. If we are to have an improved class of mine managers in the future, they can only be obtained by making the examinations thorough on all matters connected with the working of mines, and in having such we may expect to find as the result of improved scientific attainments that accidents, especially those of a fatal character, such as that at Risca, will be all but unknown.

### THE AMERICAN IRON TRADE.

All trade reports are, in our judgment, more or less imperfect. At the best they are, to a large extent, the result of mere gossip and hearsay; and in many cases they are also written by persons possessing comparatively little commercial experience, and not able to assume an independent post of observation. No doubt, our special trade journals have much improved of late years, and they are likely enough to improve still further. But still we cannot help thinking that trade statistics are, after all, the most reliable illustration of trade vicissitudes. Well, this being our view, we attach considerable interest and importance to the most recent statistics collected in illustration of the course of American metallurgy. It appears that at the commencement of July, 1880, there were 413 furnaces in blast in the United States, as compared with 277 at the commencement of July, 1879, and 248 at the commencement of July, 1878. The position of affairs would thus appear to have steadily improved—and not only steadily improved, but rapidly improved—during the last two years. At the same time, the fact cannot be overlooked that there was some reaction in the three months ending June 30 this year, since, while 431 furnaces were in blast on April 1, the number had declined to 413 on July 1. Still American ironmasters may undoubtedly congratulate themselves upon the fact that while 460 furnaces were out of blast in the United States at the commencement of July, 1878, the corresponding total had declined to 313 furnaces at the commencement of July, 1880.

The moral which we may draw from the figures which we have summarised undoubtedly is this, that although there is a check in business in the United States the commerce and industry of that great republic still present a large amount of activity. This is the conclusion which has been generally arrived at by all disinterested observers. The fact is, as we have more than once argued, there is just now a great deal of real, tangible enduring prosperity among the Americans. The nation has been exporting immense quantities of its natural produce to Great Britain, and Europe has received good prices for it, and aided by continual internal peace and the progress of population it has grown more and more rich and powerful. The surplus revenue of the Washington Treasury in the financial year ending June 30, 1880, was no less than 17,000,000, in round English figures. Can any European nation say as much? We greatly fear that it cannot. France has a rapidly expanding revenue, but most other European States (Great Britain even included) were somewhat pinched in their public revenue in 1879-80. Well, the prosperity existing in the United States has an undoubted tendency to maintain the activity still prevailing in the American iron trade. Prosperous American industry implies prosperous American railroads; and, as on this side of the Atlantic so in the United States, it is railways which are the mainstay of the American iron trade.

It may be interesting to analyse the proportions assumed in the general production by the various classes of American blast furnaces in each of the last three years. The figures come out as follows:—

Description of furnace,	1878.	1879.	1880.
Charcoal.....	64	81	131
Anthracite.....	95	101	167
Bituminous.....	89	95	115
Total.....	248	277	413

It will be observed that the number of charcoal and anthracite-worked furnaces in activity has increased much more rapidly during the last year or two than those worked with bituminous coal. It is in these last indeed that the check noted during the last three months has principally occurred. Thus while the number of furnaces worked with bituminous coal in April 1 this year was 140, the total had declined to 115 at the commencement of July.

### THE MINES AND MINERAL LANDS OF NOVA SCOTIA.

Within the British Empire there are probably few provinces containing an equal quantity of workable minerals whose resources are so generally neglected as those of Nova Scotia, the reason perhaps being that many of the Nova Scotian properties which have been introduced on the English market have been sold at prices which rendered impossible the realisation of profit by the capitalists purchasing them, so that the feeling has become general that the province offers no encouragement to Englishmen to risk their money in its mines. This grasping propensity shown by the original vendors has sufficed to neutralise all the efforts of Dr. STERRY HUNT, Prof. HIND, the late Mr. ALEXANDER HEATHERINGTON, Dr. HONEYMAN, the late Dr. How, and many others whose names are well known to the readers of the *Mining Journal*, to create a remunerative mineral industry in Nova Scotia. The coal industry, which was unaffected by the evil mentioned, has been well developed, but with regard to all other mineral workings success has been the exception, although the properties worked would, had they been acquired at a reasonable price and conducted with ordinary skill, not only have satisfied English capitalists, but would have largely increased the prosperity of the province. Attention is once more directed to the large field of enterprise which Nova Scotia offers to the mining capitalist by Mr. EDWIN GILPIN, jun., M.A. F.G.S., the Inspector of Mines for the Province (Halifax, N.S.: ROBERT T. MURRAY, Queen's Printer), in his admirable report bearing the above title, which will enable all disposed to take an interest in the development of the mineral resources of the province to ascertain at once where the particular mineral sought may be most readily obtained.

The province holds, as Mr. GILPIN explains, in juxtaposition coal, iron, and gold—a boon nature has conferred on few countries. The development of its iron ores and coal must form an important page in its future history. Indications of the presence of valuable ores of copper have been discovered, although as yet they are almost untested. Among the minerals that have been worked and present themselves over large tracts of country, permitting a greatly increased output, he mentions the ores of manganese, gypsum, and barites, ochres, brine, marble, &c. The deposits of what may be termed domestic minerals, such as gypsum, limestone, building stones, clays, &c., are of unlimited extent and good quality. The area of the iron districts has been estimated at about 3000 square miles. The gold ores of the province are as yet known only in isolated localities, the total extent of which can hardly be estimated. When, however, it is considered that the ore properties of the only two companies who have turned their attention to the subject cover 55 and 30 square miles without monopolising their respective districts, the extent of the deposits will be understood. In the chapter on coal, shales, and petroleum it is mentioned that all the Nova Scotian coal is bituminous, consisting of coking, cherry, or free burning, and cannel coal. The coals used in the several gasworks appear to average about 10,000 cubic feet of 15 candle gas, and about half a ton of coke. The ash runs high in some cases, but analyses are given of coal from certain seams which yield less than 1 per cent.

The chapter on metalliferous ores embraces notices of gold, iron, copper, lead, silver, zinc, antimony, tin, molybdenum, nickel, and cobalt, and the deposits already prospected appear to be such as in any other place than Nova Scotia would be quickly turned to account. The average fineness of the Nova Scotian gold is higher than



that of any region except Victoria, the figures being—Victoria, 958 per 1000; Nova Scotia, 955; Australia, 925; California, 880; Russia, 891; and British Columbia, 875 per 1000. The iron and steel ores, although not yet much searched for, are already proved to exist in sufficient abundance to pay largely for development. There is an abundance of galena, sometimes argentiferous, but the silver is seldom in sufficient quantity to pay for extraction. Antimony as yet has only been reported in connection with the auriferous quartz lodes; but, as it has been found in Nova Scotia, its existence in the latter province is probable. Sulphide of molybdenum is found in several places in the province, but there appears to be no great demand for it, although it can be utilised in several processes of dyeing and colouring. Nickel and cobalt ores are very common in the province, but are seldom found in more than traces. Dr. How detected these metals in magnesia alum from Newport, and in magnetic iron pyrites from Nictaux and Geyser's Hill. Zinc as yet has been observed in Nova Scotia only as an accessory mineral in auriferous quartz lodes. Messrs. BARNES and CAMPBELL reported finding tin-stone at Tangier and Shelburne associated with decomposed granite debris. Mr. GILPIN has had specimens brought to him from the neighbourhood of Tangier and Country Harbour, and heads that should this ore prove abundant in the province it would form a most valuable adjunct to their mineral resources. The volume altogether contains a vast amount of information, and whether the capitalist interested in the coal or metalliferous minerals already noticed, in minerals applicable in certain chemical manufactures—sulphur and arsenic ores, celestine (strontium ore), manganese, in mineral manures, salt, or mineral waters, building materials, or millstones, he will find that Nova Scotia is well worth consideration, and that Mr. GILPIN supplies him with all the details he need desire.

It is understood that private exploratory operations are still going on, and that during the past few months much more vigour has been displayed. Some highly satisfactory indications have been met with by various parties, and Mr. Tonquay, whose Australian and other gold mining experience has already enabled him to discover deposits, which he has sold at good profits to New York houses, has just come upon a valuable reef of considerable thickness, and which he anticipates will yield a handsome return upon the capital required to develop it energetically and on a large scale.

#### SOUTH-WEST BOARD OF MINING EXAMINERS, BRISTOL.

The ordinary annual meeting arranged by this board for granting Certificates of Competency for Colliery Managers, as required by the Mines Regulation Act, 1872, was held at the Guildhall, on July 12, 13, and 14. The examiners were—Messrs. C. A. Harrison, M.E., Fishponds, Bristol; Wm. Needham, M.E., Newport; and J. T. Thomas, M.E., Coleford. At 1.30 P.M. on Monday (July 12) these gentlemen, aided by Mr. T. Cadman, Her Majesty's Inspector of Mines, commenced proceedings by investigating the credentials required to be produced by each applicant previous to his being allowed to compete for the required certificate. Thirteen appeared with their respective licences from the Secretary of State, as per 29th sec. of the Act, and after scrupulous enquiry as to moral character and underground experience their testimonials were declared satisfactory in every respect.

The South-West Board have the reputation of being rather severe in their examination—precise and impartial in their *modus operandi*; their nominal test qualification being that of marks, each question having a maximum, intermediate, and minimum number—as 15, 10, 5. Five papers are submitted in writing answers to the questions he must not communicate with any other candidate, or copy any paper or any part thereof. Any question not understood the examiners, if asked, will explain. Anyone persistently acting in opposition to the printed instructions placed before him is liable to be dismissed and disqualified instantly.

For this occasion the papers were arranged as follows:—  
On Monday (July 12), from 3.30 to 5 P.M.

	Marks in full.
1st Subject—ARITHMETIC, 10 Questions .....	100
On Tuesday (July 13), from 9 A.M. to 11 A.M.	
2nd Subject—VENTILATION, 15 Questions .....	170
From 11.15 to 1 P.M.	
3rd Subject—PRACTICAL MINING, 15 Questions .....	150
4th Subject—PUMPING, WINDING, BOILERS, AND PIT MACHINERY, 10 Questions .....	110
On Wednesday (July 14) from 9 to 11 A.M.	
5th Subject—SURVEYING, PLOTTING, AND GEOLOGY, 11 Questions .....	120
<i>Viva voce</i> —From 3 P.M. to 7.30 P.M.	

On the whole, there are 61 questions, with a maximum of 650 marks.

Making reasonable allowance for the various degrees of mental abilities and educational advantages the examiners determined that the lowest score which would qualify for the final or *viva voce* test should be 325 marks. Each candidate worked with equal perseverance, and with great earnestness—weak in some points, strong in others—and in those abstruse questions which required careful thought and calculation several were answered with consummate ability, and have given great satisfaction to the examiners.

In the *viva voce*, which by this board is considered the real practical test of competency, it is very possible for the candidate to break down, notwithstanding the number of marks scored on his papers. Fortunately, no such ill-luck followed either of the ten, for they retained their honours, and are recommended as being entitled to their Certificates of Competency as Colliery Managers:—

	Marks.
1.—Mr. John C. Forest, Brandon Hill, Somersetshire ..	495
2.—Mr. Samuel Atherton, Lancashire ..	405
3.—Mr. Dan Morgan, Nailsea, Bristol ..	400
4.—Mr. F. W. Brain, Forest of Dean ..	390
5.—Mr. Donkin, Durham ..	390
6.—Mr. H. J. Ridler, Lydney ..	350
7.—Mr. S. T. Morgan, Nailsea, Bristol ..	350
8.—Mr. Thomas Jones, South Wales Colliery, Tillery ..	345
9.—Mr. W. T. Davies, Blairston ..	355
10.—Mr. J. W. Green, Pontypool ..	335

On the following day (Thursday, July 15) a general meeting of the board was convened for the purpose of receiving the report of the examiners, &c. Present—Messrs. W. B. Nash, Chairman; E. J. Grice, Vice-chairman; C. A. Harrison, Mining Engineer; J. T. Thomas, Mining Engineer; Wm. Needham, Mining Engineer; John Jones, Ebbw Vale; Wm. Williams, Rhymney; Wm. Churchill, Beaufort.

Mr. T. Cadman was unable to attend in consequence of the deplorable accident which had occurred at the Risca Pits.

The minutes of the previous meeting being read and confirmed the examination papers with list of successful competitors were placed before the board, and it was unanimously agreed that the report of the examiners be recorded, and duly forwarded to the Secretary of State. The next general meeting of the board to be held in Newport, on Sept. 17. Business to commence at 11 A.M.

**WEST KITTY MINE.**—The meeting of this company on Tuesday last passed off most satisfactorily. The committee were enabled to give a good account of their stewardship since the meeting which was held at the mine four months ago, and Capt. Vivian was also in a position to place before the shareholders facts which are of the most hopeful and encouraging character as regards the future prospects of the mine. The drivings eastward, towards Wheal Kitty, have been continued vigorously, and it is in this direction that the shareholders generally have looked for good returns. Nothing has transpired in the eastward drivings to damp in the slightest degree the anticipations which have been entertained regarding the ultimate richness of this portion of the property. It is true that variations have occurred in the value of the lode, but those who are acquainted with the geological characteristics of the locality are aware that these variations are almost certain to occur. The lodes generally are somewhat "bunchy," and consequently a lode which is worth 18*l.* per fathom at one time may decline in value to 10*l.* or 12*l.* in a few days, and as quickly rise again to 30*l.* or 40*l.* per fm. Therefore, the temporary decline in value of a lode need cause no alarm to shareholders. But whilst steadily continuing the driving

eastward the committee have not lost sight of the importance of exploring the mine westward, and though they have not been able to do a great deal in that direction, still the driving westward has, so far as it has gone, given most encouraging results, and the indications bear out the belief which was entertained, and often expressed, by Capt. Joseph Vivian, that under Beacon Hill a large deposit of rich ore will one day be found. Since the last meeting the committee have succeeded in obtaining an addition to the sett on very moderate terms of purchase; the value of this addition will become apparent as time goes on. The utmost confidence was expressed in the committee by the shareholders present at the meeting. Special reference was made to the great attention which Mr. Reynolds gives to the affairs of the company, one gentleman remarking that he has even more faith in Mr. Reynolds than he has in the mine; at the same time observing that he believes the mine itself to be exceedingly valuable and promising.

#### THE RATING OF MINES.

A deputation representing mine owners of the Cleator Moor and Egremont districts in Cumberland, and consisting of Messrs. John Stirling, J. S. Ainsworth, E. Wadham, W. B. Turner, J. M. Mackenzie, Jennings White, R. A. Robinson (agent to Lord Lonsdale), H. Woodcock (Whitehaven), Augustus Helder, and D. Wardlaw (Parliamentary agent), accompanied by the following members of Parliament—Mr. G. C. Bentinck, Mr. D. Ainsworth, Mr. E. Waugh, Sir Wilfred Lawson, Mr. W. S. Cane, Mr. J. G. C. Hamilton, Mr. James Cowan, Mr. Joseph Cowen, Mr. John Ramsay, Mr. Thomas Knowles, Mr. Joseph Dodds, Mr. Alexander Brogden, Mr. Charles McLaren, Mr. Aeneas McIntyre, and Mr. J. C. Bolton—had an interview, on Thursday, with Mr. Dodson (with whom were Mr. Hibbert, M.P., and Sir John Lambert, K.C.B.) at the offices of the Local Government Board, Whitehall, to urge upon the Department the expediency of amending the Public Health Act so that mines might be placed in the same position as land tithes, railways, canals, &c., for the purpose of general district rates. Mr. D. Ainsworth, M.P., who introduced the deputation, said that by a provisional order of the Local Government Board the Cleator Moor district was to be extended, so as to include many mines which were previously outside the present boundary. In consequence an exceedingly large proportion of the rates of the district would fall upon such mines and the owners and occupiers. In other words, whereas they were within former limits rated at 12,000*l.* odd, under the new limits they would be liable to a rating of over 58,000*l.* In fact, of the total rateable value of the whole district which was 81,399*l.*, the mines would have to pay no less than 58,225*l.*, or nearly three-fourths, and, perhaps, more. They submitted that it was not fair that mines which derived much less benefit than any other property from local government should pay so large a proportion of the rates of a district within which they happened to be included, and that it would be only right that they should be placed on as favourable terms as land tithes, railways, &c., which under sub-section B of section 211 of the Public Health Act were only rateable on one-fourth part of their net annual value. Owing to their interests not being at the time properly watched in Parliament, mines had been inadvertently omitted from sub-section B. Hence the injustice complained of. They urged that theirs was not a local, but a thoroughly representative case, and begged the Government to introduce a clause into the next Government Bill dealing with Local Boards which would comply with their present request.

Mr. Dodson, in reply said—I have listened to what you have to say with considerable interest. Your case has been stated very clearly. I have been anxious to hear what you have to say with the view of eliciting your opinion, and what were the facts. I can only say that what you have said now shall receive from me the attention to which it is so well entitled. Having regard to the wide range of matters involved, you will not now expect me to express my own views on the subjects which you have been good enough to lay before me. They shall have my best attention.—The deputation thanked Mr. Dodson and retired.

#### THE CHANNEL TUNNEL.

Although for the last few years comparatively little has been heard of the Channel Tunnel the investigations of those interested in the project have been steadily carried on, and with results which may be considered to leave no doubt that unless there exists between the coasts some fault which scientists regard as improbable the tunnel can be speedily and safely made, and it is even thought that neither pumping nor timbering will be found necessary. The line originally proposed was from Cape Grisez to St. Margaret's Bay, but subsequently Sir John Hawkshaw suggested that from Sangatte to Dover, as giving a larger proportion of the distance through the impermeable grey chalk, and it now appears that the directors of the South-Eastern Railway Company have revived their suggestion for the transference of the English end from St. Margaret's Bay to a point between Dover and Folkestone, where the grey chalk crops out above the level of the sea, and it appears from their report that they have deemed it advisable to make arrangements for a series of important experiments "which so far have shown favourable results." With the aid of a grant of 6000*l.* from the Railway Company the experiments are being carried out under the direction of Colonel BEAUMONT and Capt. ENGLISH; and during the present week Messrs. DUVAL, IRETON, and LEON SAY, Count DE MONTEBELLO, and other Frenchmen who are favourable to the undertaking have visited the scene of operations, and expressed themselves highly satisfied.

It appears that a shaft 15 fathoms deep from surface has been sunk, and an adit level driven from just above high-water mark, in order to facilitate tipping the chalk debris. It would be interesting to learn the precise depth below high-water level which the shaft has reached. Powerful machinery has been fixed to work an air-compressor to operate the rock-drills which are to be used, and with which it is intended to drive a heading under the line of railway as far as Dover—a distance of three miles—at such an inclination that at Dover the depth shall be 50 fathoms. The driving of this level will at least prove whether the chalk is sound and impermeable in that direction, and in the meantime it will be carefully ascertained in how many places in England a stratum continues for 25 miles without a fault, and in how many places the occurrence of more than one fault could lead to false conclusions (the faults not having been seen) as to the continuity of the stratum. That corresponding strata of grey chalk exist both on the English and the French coasts is not doubted, but as a single pair of faults, or what is commonly known as a single wedge fault, would upset all the calculations already made it is considered essential that all facts bearing upon the subject should be carefully collected. This, indeed, would seem to be the view taken by the South-Eastern Railway directors, for in their report they say—"The experiments made by the French engineers after great pains and labour tend to show that the geological measures are not only in the same position but are of the same thickness on each side of the Channel, and the stratum known as the old grey chalk in England, and as the Craie de Rouen in France, is impervious to water, and is without fissures. These are the foundation facts in this interesting question, for if a tunnel can be made without pumping or timbering, and entirely from side to side through the grey chalk, then an apparently formidable and even hopeless work becomes matter of close calculation. As the researches of the French engineers confirm the view for years past taken that the proper point of departure for any future tunnel is at the outcrop of the grey chalk on the South-Eastern line between Folkestone and Dover, and not at St. Margaret's Bay to the east of Dover—where the grey chalk, dipping to the northward, does not crop out—the directors have deemed it advisable to make arrangements for a series of important experiments, which, so far, have shown favourable results.

The anticipation that it will be practicable to dispense with pumping and timbering is probably much too sanguine, but the opinion which they prove to exist is encouraging, for if the percolation be only such as can conveniently be met, and there is no reason why the work should not be completed so far as any obstacle from drowning out is concerned, and the principal fact to be ascertained would appear to be whether the Craie de Rouen is really impermeable, and

whether there is indeed the absence of fissures which has been claimed for it. The subject has certainly made a step forward by being removed from the realms of pure speculation to those of engineering probabilities, and as the directors of the South-Eastern Railway Company are evidently alive to the importance of calculating cost, as well as practicability, it may be hoped that the public will soon be in possession of details which will remove all doubt.

It is understood that the object of the visit of the President of the Senate, Mr. Léon Say, to Folkestone was to facilitate the decision as to whether the French Government would grant a subvention to the projectors of the tunnel, and gratification was expressed by those concerned as to their prospects, as it was believed that Mr. Léon Say rather favoured the tunnel project. His influence, however, is not likely to prove effective, as both the Minister of Public Works, Mr. Varroy, and Mr. de Freycinet, the President of the Council, incline to the project for expending the money, if any is to be voted, in the improvement of the harbour-works, docks, and approaches at Boulogne. It is urged, and not without much reason, whilst the tunnel scheme is unlikely to yield any commercial advantage, and has, at the same time, but a highly speculative chance of turning out a scientific and engineering success, the expenditure of an equal amount of money, or even of 5,000,000*l.* or 6,000,000*l.* only upon the harbours of Boulogne, Abbeville, Fecamp, or Dieppe would ensure an abundant commercial return, and benefit the entire French nation.

#### THE BASYE CONSOLIDATED SILVER MINING COMPANY.

In the High Court of Justice, Chancery Division, on Monday, there was an application, under circumstances of some apparent hardship, to make Messrs. Dyett and Loutitt, the liquidators of a defunct company known as the Pinto Mining Company, liable in the winding-up of the Basye Company in respect of 3919 shares of 5*l.* each, on which 4*l.* 10*s.* was paid-up. It appeared that upon the Pinto Mining Company being wound-up in 1873, the Basye Company was formed to take over the concern, and an agreement was entered into for the sale of the Pinto Company's property to the Basye Company for the sum of 91,000*l.* payable partly in debentures and fully paid-up shares and in 14,000 shares in the Basye Company of 5*l.* each, on which 4*l.* 10*s.* was to be considered as paid-up. These shares were to be taken by Messrs. Dyett and Loutitt, who were to dispose of them to the shareholders, mortgagees, or creditors of the Pinto Company; and it was agreed that if any of these persons should neglect or refuse to take their proportion of these shares Messrs. Dyett and Loutitt should re-transfer their interest in the surplus shares to the Basye Company, "without incurring any liability or responsibility." This agreement was registered together with the Memorandum and Articles of Association of the Basye Company, and was carried into effect by a deed of Dec. 15, 1873, which contained a receipt by Messrs. Dyett and Loutitt for the shares—3919 shares were not taken up, and in a report which was furnished to the Basye Company by their directors it was stated that these shares had been returned to the Basye Company. However, no formal re-transfer of the shares was ever executed, and, accordingly, when the Basye Company in its turn came to be wound-up, the names of Messrs. Dyett and Loutitt stood on the register for the 3919 shares. No notice was ever given to these gentlemen of the allotment of the shares to them or of their registration, nor were certificates for the shares sent to them nor any calls made upon them, although calls were made upon the persons who had taken the other shares. On the other hand, it appeared that Messrs. Dyett and Loutitt had applied for the shares and requested that 3919 should be allotted to themselves.

Mr. Graham Hastings, Q.C., and Mr. Chadwyck Healey appeared in support of the summons; Mr. W. Pearson, Q.C., and Mr. Pugh for Messrs. Dyett and Loutitt.

Mr. HASTINGS, Q.C., having been heard in reply.

The VICE-CHANCELLOR held that the two gentlemen in question were liable as contributories, it being an untenable contention that they were improperly on the register. This was not a case in which the nature of the application upon which the allotment was made was unexplained by any antecedent contract. Under the contract between the Basye Company and the liquidators of the Pinto Company the only duty of the Basye Company was to put the shares in the names of the persons specified by the liquidators. It was left rather obscure upon the terms of the contract what course was to be taken by the liquidators as to shares which could not be taken; but it was clear that something formal should be done. The only thing that the liquidators did was to request the new company to allot shares on their account in specified numbers to specified persons. In the list of persons Messrs. Dyett and Loutitt were included for 3919 shares. Acting on that, the Basye Company allotted the shares and entered the allottees on the register. It could not be said that it was necessary to get their express authority for putting them on the register. When they, the Pinto Company's liquidators, required the Basye Company to pay the consideration for their purchase they required complete payment, and, therefore, the direction given by the liquidators involved a complete authority to allot and register the shares. The object of a communication to an applicant was ordinarily that the applicant might not be in the dark whether he had got the shares. A company might, for instance, not have the shares to give. Here the shares were appropriated to the liquidating company, and there could be no doubt about the allotment taking place. As for any collateral arrangement or understanding, the Court had nothing to do with that, nor, in his lordship's opinion, would there have been any ground for relief if the respondents had taken the shares in form as trustees. The creditors of the company (who were the persons to be considered) would not be prevented from having a right to treat them as contributories. The order declaring their liability would, however, be made without costs, the liquidator taking his costs out of the estate.

#### FOREIGN MINING AND METALLURGY.

In connection with the Belgian iron trade it is intimated that the John Cockerill Company makes an imposing display of its products at the Belgian International Exhibition. The Belgian iron trade has presented a decided revival. In two or three cases important establishments have been obliged to refuse orders for iron. Rolled iron is in request, and the United States will, it is thought, continue their purchases in Europe. A fall in price is considered out of the question, and business could not now be done upon any pretext below 5*l.* 4*s.* per ton. Plates have exhibited an upward tendency, and transactions have not been carried through very readily at 7*l.* 4*s.* per ton. Pig-iron has experienced a decided upward movement; business is reported to have been done at 2*l.* 10*s.* 6*d.* per ton. The organisation of a new public works company is mentioned as probable in Belgium. This company proposes to have a capital of 120,000*l.* in shares, and 40,000*l.* in obligations. It will combine under one management—the Braine-le-Comte (Belgium), the Savigniano (Italy), and several other works.

Coke-made iron has brought 8*l.* 8*s.* per ton in the Haute-Marne (France); this price has been readily accepted, and there has been a fair current of business. There has also been a tolerably good demand for sheets and wire; prices have not exhibited much change. The Creusot works have contracted to supply the Paris, Lyons, and Mediterranean Railway with rails at 6*l.* 16*s.* per ton; this price has excited a good deal of astonishment. The German iron trade has acquired additional strength, and the week which has just elapsed has been attended with a rise in various descriptions of metallurgical products. It is stated that this result is due to a convention of proprietors of blast furnaces and forges; whether this is the case or not the rates current for both iron and casting pig have exhibited a slight advance. Rolled iron and plates have also been firm in Germany. The rise in iron at Glasgow has made its influence felt upon the Austrian markets, upon which prices have sensibly hardened. English pig has been quoted of late at St. Petersburg at 72*s.* per ton.

The aspect of the Belgian coal market is more favourable than it has been for some time past, and prices have been maintained with considerable firmness. Consumers show a disposition to conclude contracts for a year at present rates, so as to protect themselves against any possible advance in quotations. It is not expected, however, that prices will show any advance for some time to come, as



there must be a marked advance in metallurgical products before a corresponding rise takes place in coal. The Austrian coal trade has remained quiet; prices have at the same time been maintained with firmness, and in the lignite districts deliveries have even become active. Transactions have continued quiet in the French coal trade, and there has been little change in the general aspect of the market. Intelligence received with respect to the German coal trade speaks of a reduction in the production. The Anzin Company has taken contracts to supply the coal required for the Prefecture of Police, Paris, and the Prefecture of the Seine at 28s. to 29s. per ton.

A blue-book just issued contains a report on the foreign trade of Venezuela by Mr. Bunch, Her Majesty's representative there. Perhaps the most interesting remarks are those relating to the gold mines in the State of Guayana. These gold fields, says Mr. Bunch, are practically unknown to the world at large, on account of their inaccessibility and the natural reticence of the persons interested in the mines, who wish to avoid competition. From a return furnished by Vice-Consul Matthiessen it appears that during 13½ years, from 1866 to 1879, the amount shipped at Ciudad Bolivar, was valued at 2,649,208½ sterling. From Jan. 1 to June 30, 1879, the quantity exported was valued at 244,536. These amounts are according to the official declarations, but a great deal of bullion is also carried away by passengers, and of this there is no record. New deposits of extraordinary richness have lately been discovered near Pastora, and notwithstanding the frequent political disturbances capital is being attracted to the district, and it is said that an English company propose to invest largely in gold mining there. About 4000 men are employed in the mines, chiefly coloured British subjects from the West Indian Islands.

One of the important questions which have arisen in Russia in connection with the anxiety of the Government to develop the coal and iron industries of the empire is that of the adaptation of the railway system to this purpose. With the exception of Moscow there are really no railway centres in Russia, and consequently Russian home trade languishes. On all the Moscow lines English coal is used because Donetz coal is at present not obtainable; and Moscow itself is lighted with gas made from imported English coal. Old rails, which originally came from England, are sold for a mere trifle, and sent back here because there are no ironworks in the interior of Russia where they could be worked up; such works cannot exist because of the immense distance which the material to feed them would have to be brought under existing arrangements. There are iron mines in the centre, but they cannot be worked because there is no railroad near, and no means of bringing coal to them. One of the most celebrated iron establishments in Russia is that of Mr. S. J. Maltzoff. At these works locomotives which may be seen on all Russian railways are made; it is almost incredible, but nevertheless true, that the works are situated nearly 50 miles from any railway. In the provinces of Orel and Kaluga there are valuable minerals, coal, and forests in abundance, but they are not utilised because of their distance from the nearest lines, the distance to one railway being 50 miles, to a second 80 miles, and to a third 100 miles.

#### WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,  
MINEOWNERS, STOCK AND SHARE DEALERS, &c.  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Mr. William Derry, it appears, is a constant reader of our remarks, and is "bound to admit the generally sound arguments contained in them." But we are not, he says (and we admit it), infallible any more than others of human kind; and, therefore, he thinks we shall find in reviewing our statements in regard to the Trelawny district that we have hastily and unguardedly made remarks which that "well-known valuable and rich property, Wheal Hony and Trelawny United Mines, does not merit." But the singular thing is that, without pointing out a single mistake we made, he confirms the only thing we expressed a doubt upon—that the Trelawny Company did purchase a field (and we might add the field required by Trelawny) of Dr. Hony for 12000. We were connected with the Trelawny district from its commencement to its close; and although there was nothing in our remarks to insinuate that lead might not be found in other lands of Dr. Hony, we confess we have been perfectly astounded at the statements which have been advertised throughout the length and breadth of the land in regard to "Wheal Hony and Trelawny United." Mr. Derry states that he will be supported by some of the best mining agents in the kingdom that the calculations contained in the "Hony prospectus" are substantially correct, and the estimate of future profits extremely moderate. Now, we have not the pleasure of knowing Mr. Derry; we have not read the Hony and Trelawny prospectus, nor have we ever referred to it. Our remarks of the week before last were simply given in answer to one among many enquiries made to us in reference to the Trelawny district. But as Mr. Derry has called them in question, and has specially referred to the Wheal Hony and Trelawny Company, we ask him to name any one agent in the kingdom who will justify the following statement, selected from others published freely last week in London and country papers:—"The Wheal Hony and Trelawny United Silver Mining Company (Limited)." "The silver-lead ore in the Hony estate alone is valued at 1,600,000." Who was the valuer, and how did he value it? The Trelawny lode, of which we wrote, runs north and south, and failed south beyond Mary Ann. North it was worked in Trehan and other mines—North Trelawny, Venton, Penhauger, &c. There were also Wheal Wrey, Ludcott, and Treweatha.

The last time we were on Trelawny Mine, in 1861, the mine had to that time paid 36,406l. in dividends; it then got into debt, and the management was handed over to Mr. Francis Pryor, who at once made a call upon the shareholders of 17. 10s. per share to clear liabilities, and for a time he made good returns; but the cost of the mine was nearly 20000l. per month, and it had to be abandoned. And we can assure Mr. Derry, so far as Trelawny is concerned, Mr. Pryor extracted most of the honey.

Among the other mines we have named to the north we might remark that Wheal Wrey was very rich at starting, and gave promise of great success for a time. It began dividends in 1855, and paid altogether about 10,000l. In 1856 it paid in one year 5529l. 12s. From Wheal Wrey the ore dripped into Wheal Ludcott, which commenced dividends in 1859, paid a few thousands, and then stopped. Treweatha began dividends in 1853, and paid 1024l. in 1854, 1638l. in 1855, 819l. 4s. in 1856, 2457l. 12s. in 1857, 614l. 8s.; and then heavy calls had to be made to carry it on. North Trelawny made good returns shallow.

Reviewing these facts, then, we come to the following conclusions:—1. The Trelawny has been a rich mining district.—2. Its riches ran north.—3. With the exception of Wheal Trelawny and Mary Ann none of the mines, for reasons we may explain hereafter, were thoroughly proved in depth.—4. A company having a tract of untried ground in the vicinity of these mines may have a valuable speculation. But our question is, what agent has valued the ore in an untried piece of ground at 1,600,000l., or more than double what the whole district, including Trelawny and Mary Ann, has produced?

An oitava is about the eighth of an ounce, and to say a mine "returned 8000 oitavas" looks bigger than to say "1000 ounces."

In the bottom level of Prince of Wales (the 96) a course of ore was gone over for several fathoms, worth 4 tons per fathom, and the ends were also very promising. We have great hopes here.

Pitangui shows a profit of 2425l. 4s. 5d. for the month of May; but the produce for the first half of June is only 917l. 5s.—much less than the corresponding half of May, owing to the Ouro Podre shoot of gold becoming disordered. This is considered only temporary.

At Carnarvon the agent hopes soon to have something good to report in the new mine, where the trial shaft is very promising.

Clementina is looking well, and the agents hope to realise all our expectations respecting it. A good deal of time and money was expended in erecting a large 60-ft. water-wheel (in addition to the

other machinery), at a cost of at least 10000l. altogether. For some time past a rise has been going up from the back of the 34 fm. level to meet a sump going down below the 15. In the rise from the 34 the lode is now worth 1½ ton of lead per fathom. In the sump below the 15 it is worth 15 cwt. per fathom, and when the communication is made good lead ground will be opened out for slopes, and we shall hope to see good profits made. At present the returns do not quite meet costs. The whole capital of the company is only 5120l.

When Pitangui shares, 12 or 18 months ago, were at a discount, that is 7s. 6d. per share with 10s. paid, we called attention to them several times, referring particularly to the points to come off, and the rise that might take place in shares if the points were referred to turned up. Shares are now 4l. each, and likely to go much higher and pay large dividends.

Mere speculators, however, don't care much for "points to come off." The only point they can appreciate is to buy shares one day and sell them at a profit the next. But that is speculating in shares, and not mining.

We cannot control market prices, but we endeavour to keep, in our recommendations certain points before our readers, which, if successful, must result in a rise and in success. The great point in Polrose is the cutting the Polrose lode, in Carnarvon getting under the copper at the 90, and into ore at the new mine, in Aberllyn lead under the blende. All of them certainties as far as mining can be certain. But, until they are reached shares may not move, for as a general rule the public never buy when things are low. No truer rhyme was ever penned than this—

"When things are high, the public buy;  
When things are low, they let them go."

There are great points to come off at D'Eresby Mountain, Clementina, Parys, Prince of Wales, and Morfa.

#### FUEL—ITS NATURE AND APPLICATION.

Whatever branch of industry a man may be engaged in a knowledge of the nature and relative value of fuel of various kinds cannot fail to be useful to him, but for a treatise on the subject to be generally acceptable it is essential that it should be popularly and lucidly written, and at the same time scientifically accurate. Such a treatise\* has just been completed by Prof. ROBERT GALLOWAY, whose name is well known in connection with many of the best students' treatises on chemistry. It appears that the treatise is based upon the lectures on fuel, delivered by the author as professor in the Royal College of Science, Dublin, and it has been so written as to be useful alike to students in the higher schools and colleges of science and to manufacturers. Commencing with the physical and chemical properties of the various kinds of fuel, the Professor explains that the substances termed fuel consist of woody tissue in an unaltered or an altered form, or they are substances derived from it by natural or artificial means. Wood is unaltered woody tissue, containing, in addition, water and inorganic substances; the latter constitute the ash. Peat is woody tissue slightly altered, and the different varieties are still more altered forms of it. Peat and coal contain, like wood, variable proportions of ash and water in addition to the organic or combustible portion. These different altered forms of the tissue have been brought about by natural operations. Other forms of fuel are products obtained from wood, or its altered forms by artificial processes, as charcoal, coke, liquid and gaseous hydrocarbons, and so on. Liquid and gaseous hydrocarbons are also produced from coal by natural means.

After explaining the formation of carbonic anhydride, marsh gas, and water from wood under certain conditions, Prof. Galloway points out that we may from a knowledge of these facts explain theoretically the conversion of wood into peat, lignite, and the other varieties of coal. In the passage of the wood into these other forms of fuel the proportion of carbon decreases less relatively than the hydrogen and oxygen, and the oxygen decreases more rapidly than the hydrogen, so that the proportion of the latter element in excess of the quantity required to form water with the oxygen keeps increasing as the change of the tissue progresses until anthracite, the ultimate product of the conversion, is reached. It is considered that of the hydrogen in the fuel it is only the excess quantity, the "disposable hydrogen" of the Germans, that is available as a source of heat. In all fuel containing oxygen as well as carbon and hydrogen, the proportion of hydrogen may be sufficient or more than sufficient, but never less in quantity than is required to form, with the oxygen, water. Tables are given showing the gradual passage of vegetable matter into anthracite, or that variety of coal which consists almost wholly of carbon, and furnishing the average elementary composition of wood, peat, and different varieties of coal in the dry state. In describing the physical and chemical properties of various kinds of fuel, the tables showing the percentage of water in different kinds of fresh cut wood, the proportion of water in wood at different periods of the year, the difference in the dessication of barked and unbarked wood by exposure to air, the amount of water expelled from air-dried wood at gradually increasing temperatures, and the specific gravity of different kinds of wood will be found very useful. After mentioning the various kinds of fuel attention is directed to the gases occluded in the pores of the coal and the weathering of coal, with which is closely connected its spontaneous ignition, which also proceeds from oxidation. It appears that coal most liable to spontaneous ignition is not that which contains most iron pyrites, the spontaneous ignition of coal being due to the heat developed by atmospheric oxidation of the organic substances of coal, and not to that resulting from the oxidation of iron pyrites.

The methods of determining the heating power of fuel are considered in the next chapter. Of the elementary constituents of fuel only the carbon and hydrogen enter into union with the oxygen of the air, and, therefore, these are the only elements in the fuel which contribute to the generation of heat; further, if the fuel contains oxygen this constituent must be considered as if already combined with its equivalent quantity of hydrogen in the fuel, and it must be remembered that it is only the disposable hydrogen which is effective. The absolute amount of heat which any substance evolves in burning cannot be ascertained, but the relative amounts evolved by equal weights of different substances can be accurately determined. The unit of heat or the thermal unit chosen for comparison is not everywhere the same. In France the one selected is the quantity of heat necessary to raise the temperature either of one gramme or of one kilogramme of water from 0° to 1° C. The latter unit is frequently employed in England, but not universally; 1 lb. of water from 0° to 1° C. is sometimes employed, and sometimes 1 lb. of water 1 Fahrenheit degree from 50° to 60° F. What unit weight of water is selected is immaterial, although it is most desirable that one standard (the gramme) be adopted; but it has hitherto been considered not immaterial what portion of the thermometric scale was selected, as the specific heat of water was considered to increase slightly as the temperature increased beyond its point of greatest density. But Hirn, in recently investigating this subject, has arrived at the conclusion that the specific heat of water does not exhibit any irregularity near its point of maximum density, but merely changes somewhat more quickly below than above that point.

That the theoretical heating power of coal is never obtained in practice is only too well known, but it cannot be doubted that by thoroughly studying and considering the reason of this—for doing which Prof. Galloway affords abundant information—much of the waste which now takes place may be avoided, and perfection much more nearly obtained. He shows that the calorific intensity deduced from the elementary composition of the fuel is not accurate, that the manner in which the elements are combined and their state of condensation in coal is not known, and that the organic elements are arranged differently in different coals. There is an excellent chapter on pyrometers, explaining the principles on which they have been constructed, and giving a description and illustration of Siemens's electric resistance pyrometer. Siemens's regenerative furnace is thoroughly and minutely described in the succeeding chapter, and there is then a very useful chapter on the technical examination and analysis of coal; whilst by way of appendices there are a sketch of the cele-

\* "A Treatise on Fuel; Scientific and Practical." By ROBERT GALLOWAY, M.B.A., F.C.S. London: Trübner and Co., Ludgate Hill.

brated Torbanehill mineral case, of Goldsworthy Gurney's utilisation of carbonic anhydride as an extinguisher of combustion on a gigantic scale at the Earl of Mansfield's colliery near Stirling, and a table giving the names and composition of the constituents which have been discovered in the gaseous, liquid, and solid products formed in the destructive distillation of coal. The treatise is concise without being unreadable, and contains an enormous amount of information, given in such a form that the reader can readily turn it to account, so that it cannot fail to secure a good reception.

#### ANTIMONY, AND ITS USES.

The fact that the general public are so little acquainted with the character, production, and uses of antimony, although it is largely employed in the arts, is attributed by the Boston Economist to the circumstance that they have never seen any manufactures of antimony, because the metal is never employed alone in the arts, but as an alloy with other metals, whereby they are rendered either harder or more brittle, or capable of receiving a higher polish, or melting at a lower temperature, or flowing more readily when molten, than they otherwise would when uncombined with antimony. The principal ore of antimony is grey antimony or stibnite, the pure metal being rarely found. This stibnite is a combination of antimony and sulphur, and is found associated with other ores, such as lead, silver, zinc, and iron, the gangue being either heavy spar or quartz. When first mined stibnite resembles the common lead ore, galena; but, unlike that, it soon loses its lustre on exposure. Antimony ore may be readily recognised by its extreme fusibility, melting in the flame of a gas jet, as also by its colour. The metal antimony, called regulus of antimony, is a silver-white brittle metal, coarsely crystalline in texture; it fuses at about 800° Fahr. The present consumption of regulus of antimony is considerable, and continues to increase.

Heretofore and at present antimony is largely employed in the manufacture of type metal, music and stereotype plates, pewter and Britannia ware. It is also largely used in the composition of anti-friction alloys, such as Babbitt's metal, &c., in spectra and other scientific instruments and in bells. It is indispensable in the manufacture of shot, shell, balls and bullets. It is largely used as medicine. As a paint for vessels' bottoms its oxide is unequalled, and whenever its oxide can be produced at a reasonable price its superior qualities will enable it to supersede lead and zinc in the manufacture of white paint for domestic purposes. Even at the present high cost of the oxide of antimony large quantities of it are consumed in the manufacture of paints for the use of artists and others desirous of a superior article for the nicest work.

Antimony is a metal whose usefulness is only circumscribed by its cost. Being comparatively a new metal, limited in production, there having been no discoveries, until recently, of large deposits of its ores, it has not received that careful attention and experience which has been in every instance necessary to bring other metals into their present prominent and almost universal use. Eagerly sought for by manufacturers as an essential component of alloys, its scarcity, enhancing its market value, has in many instances completely precluded its use by them; thus to-day many valuable inventions and manufactures either languish or are abandoned because antimony is absolutely necessary to their success, there being no other metal in these particular instances to take its place. What mercury is to gold antimony is to silver, with the exception that mercury, being fluid, requires no heat to produce the required result, but antimony, although melting at a very low temperature, requires sufficient heat to render it fluid. In this state it attacks and combines with the silver in its ores, and, finally, both mercury and antimony, being the most volatile of metals, the concluding process is almost identical in operation. Could antimony be procured in sufficient quantities, with a certain supply, even at its present high market price, its employment in the extraction of silver from its ores would completely supersede that of lead in the United States, by reason of the fact that by its use ores may be made to yield a higher percentage of silver. Economy in reduction, and, above all, the great saving made between the expense of transporting long distances to the refining furnaces a few tons of antimonial silver regulus, and a large number of tons of lead bullion.

The mines of Borneo have hitherto been virtually the ones producing largely; their supply, however, has been subject to interruption, occasioned either by the caprice of the ruling monarch or political dissensions in that country, or the monopoly of all its ores by a few English capitalists. For many years cabinet specimens of antimony ores have been obtained at Carmel, Maine, Lyme, and Cornish, New Hampshire, and Soldiers' Delight, Maryland. The most diligent search has failed, however, to develop yet in either locality any considerable quantity of the ores. Rich ores of antimony have been discovered in Prince William, in the province of New Brunswick, and small expenditures of money have been made to develop their character. These operations were conducted in a most unskillful manner, yet they definitely determined that a belt of parallel contact veins, with an east and west strike, having small feeders running to the north and south, exist; that the ore is of the richest character, approaching native antimony; that it can be procured in large quantities from the east and west veins, and that the developments already made at the several mines warrant the expenditure of large sums of money in prosecuting the work, as there can be no doubt that soon the Prince William Mines will be able to supply the wants of the market; and as the supply of Borneo ores has so greatly fallen off as to create a decided enquiry in England for New Brunswick ores, the Americans may congratulate themselves that soon almost the total production of this useful metal will be transferred to the American continent.

MANUFACTURE OF COMPRESSED FUEL.—It has been so frequently stated that the obstacles in the way of producing a really good compressed fuel from small and refuse coal have been surmounted, that many have come to the conclusion that the statements of inventors cannot at all times be relied upon, as it is still evident that perfection is far from having been obtained. Mr. E. F. LOISEAU, of Philadelphia, once more asserts that he has been successful. It is stated that in endeavouring to use the enormous quantity of anthracite slacks annually wasted, he has been forced to contend with conditions differing largely from those observed abroad; and he has, therefore, with much persistence and judgment, pursued an independent path. In Belgium and France the raw material is the culm of bituminous coal, which was first used for making pressed fuel in Belgium in the year 1852. Since then it has grown in that country until considerably more than half a million of tons is produced, while France turns out more than double that quantity. After being washed, if necessary, the fine material is mixed with suitable cement to conglomerate the coal dust, and then pressed into shape of cylindrical or square blocks, called briquettes. Numerous substances have been proposed as a cement, among the most recent and promising being Irish moss, which is converted into a gelatinous substance by boiling or by addition of acids. The most general substances used, however, is either in the crude state or in the shape of dry pitch, prepared by separating the volatile substances by heating to a temperature of 570°. The former method is used chiefly in France, while the latter has become very popular in Belgium. When the dry pitch is used it is simply mixed with the coal dust, and the mass is rendered plastic in a mixing cylinder by the application of superheated steam. With tar, of course, a much lower temperature will suffice. The machinery used is varied according to the nature of the raw material used. It is understood that Mr. Loiseau is now using, or proposes to use, the Belgian machine, and from the excellent quality of briquettes produced both in France and Belgium it is probable that this time success really will be achieved.

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(Incorporated by Royal Charter). Notice is hereby given, that the THIRTY-FIFTH ANNUAL GENERAL MEETING of the Shareholders of this Company will be HELD at the Guildhall Tavern, No. 32, Gresham-street, E.C., on MONDAY, the 26th inst., at One o'clock P.M. precisely.—To receive the Report, Accounts, and Balance-sheet for the past year; to elect Directors in lieu of Sir Charles Whitham and George Palmer, Esq., who retire by rotation and offer themselves for re-election; to fix the remuneration of the Auditors for the past year; to elect auditors for the present year. By order, U. P. HARRIS, Secretary. The Transfer-books will be closed from the 17th to the 31st. inst., both days inclusive. No. 1, Coleman-street Buildings, Moorgate-street, E.C., 9th July, 1880.

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IN the MATTER of the COMPANIES ACT, 1862, and of the FRANK MILLS MINING COMPANY—ALL CREDITORS or CLAIMANTS of the above-named company, who have not received notice from the Official Liquidator thereof that their claims have been already admitted, are hereby required to COME IN and PROVE their several DEBTS or CLAIMS at the Registrar's Office, Truro, on Thursday, the 5th day of August next, at Eleven o'clock in the forenoon; or, in default thereof, they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such proof. And for the purpose of such proof they are to attend in person, or by their solicitors or competent agents, at the time and place above mentioned. FREDERICK MARSHALL, Registrar. Dated Registrar's Office, Truro, the 21st day of July, 1880.

## ABSOLUTE REVERSION TO SHARES IN THE SOUTH HETTON COAL COMPANY.

MR. ROBERT REID WILL SELL, at the Mart, on Friday, August 6th, at One for Two o'clock precisely, the ABSOLUTE REVERSION TO ONE-SIXTH OF THE SUM OF £25,000, Invested in Shares of £100 each in the SOUTH HETTON COAL COMPANY (LIMITED), fully paid-up, expectant upon and to take effect immediately after the death of a gentleman now in his sixty-second year. Particulars may be obtained of Messrs. G. S. and H. BRANDON, Solicitors, 15, Essex-street, Strand, W.C.; at the Mart, E.C.; and of Mr. ROBERT REID, 48, Great Marlborough-street, W.

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JONES v. CHORLEY.

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TO BE SOLD, BY AUCTION, pursuant to an order of the High Court of Justice, Chancery Division, made in an action BURNABY v. BOUTLEE, 1853, D 86, with the approbation of Vice-Chancellor BACON, by Mr. WM. TAYLOR (the person appointed by the said Judge), at the George Inn, Alfreton, in the county of Derby, on Friday, the 30th day of July, 1880, at Twelve o'clock at noon, all that

## VALUABLE MINERAL AND FREEHOLD ESTATE

Belonging to the Trustees of the Will of the late Sir WILLOUGHBY WOLSTAN DIXIE, Bart., and situate in the parishes of SELSTON, Nottinghamshire, and ALFRETON and CODNOR PARK, Derbyshire, as shown on the surface and mineral maps accompanying the present advertisement, and conditions of sale. The MINERALS will be offered FOR SALE in One Lot apart from the surface. Underlying the estate are all the well-known seams of COAL and IRONSTONE worked by the adjoining collieries, which are the most valuable seams in Derbyshire and Nottingham, including the TOP HARD, MAIN SOFT, DEEP HARD, FURNACE, and BLACK SHALE. The lower seams are practically untouched, and extend under about FIVE HUNDRED AND EIGHTY ACRES. The upper seams, with the exception of the Top Hard, occupy about FOUR HUNDRED AND FIFTY TO FIVE HUNDRED ACRES. The schedule accompanying the particulars and conditions of sale specifies the quantity of each seam believed to exist. The workings of the Pinxton, Riddings, and Mexboro' Collieries with new pits recently opened in the neighbourhood approach and pass through the various blocks into which the estate is divided on the mineral map.

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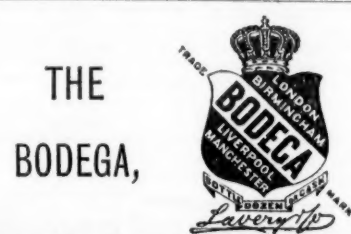
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MINING ENGINEER,

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author of a "History of the Precious Metals," &c., 216, SANSOME STREET, SAN FRANCISCO, CALIFORNIA.

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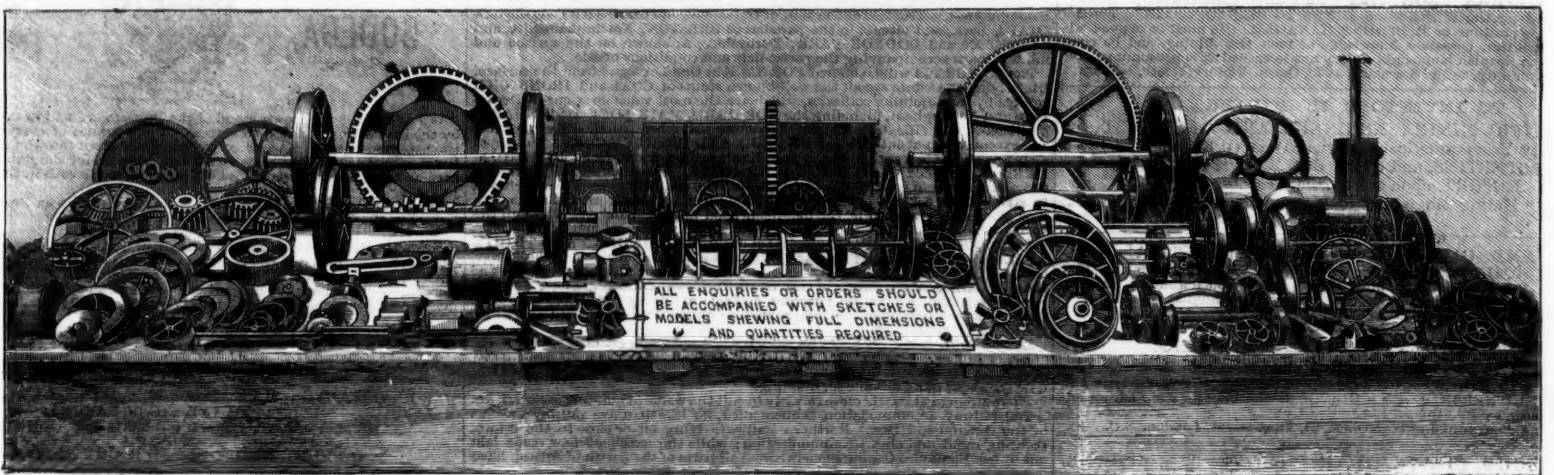
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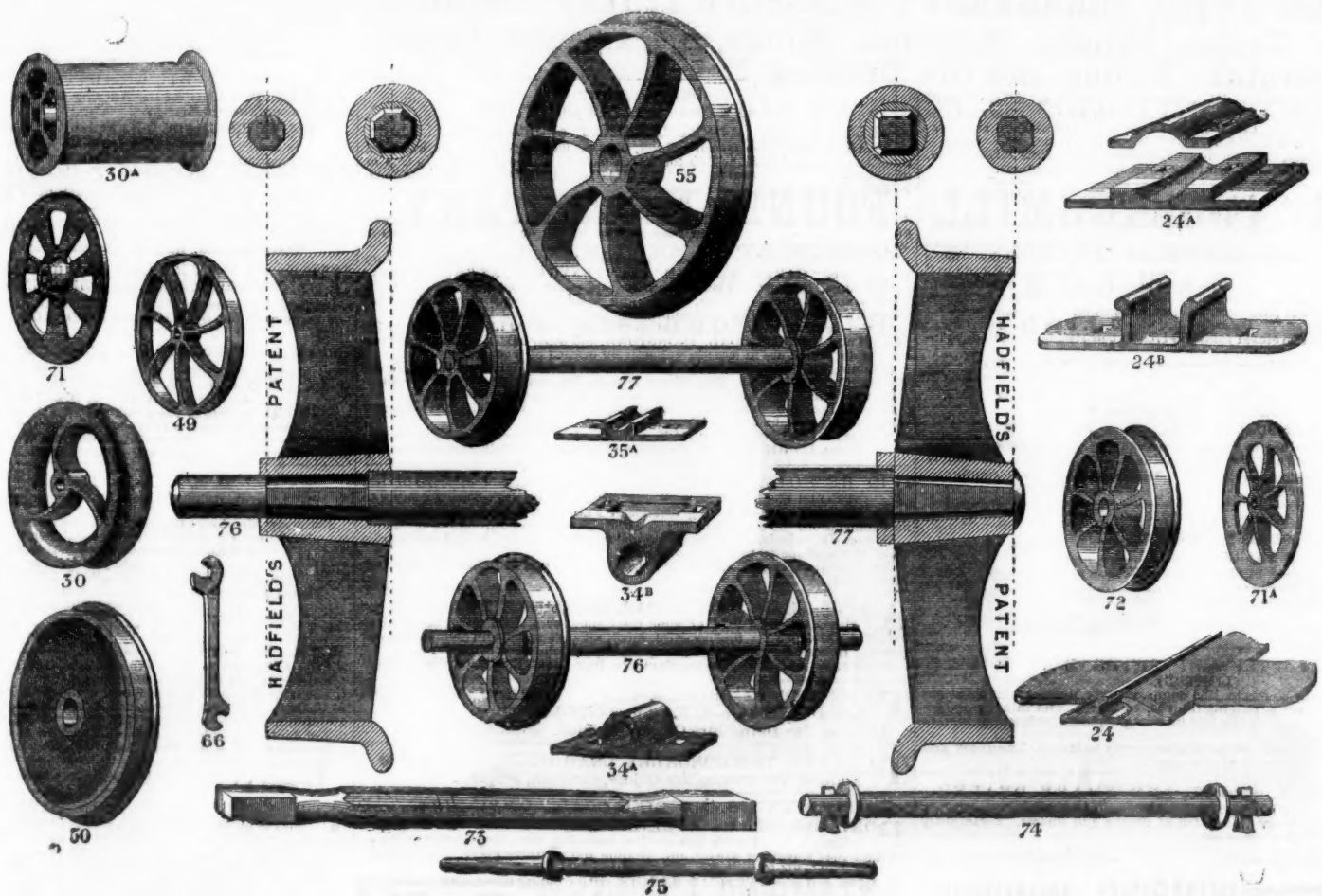
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One of our departments is specially adapted for the manufacture of these Wheels (as shown below), for Collieries, Ironstone Mines, Slate Quarries, Ironworks, Lead Mines, &c., &c. We have made, and are now making, many HUNDRED THOUSANDS; and having Patented a New Method of Fitting Wheels upon axles, being cheap, effective, and expeditious, we can execute orders entrusted to us with promptitude, our capacity in this department alone being equal to about 2000 wheels per week.



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The advantages of the above system are that the Wheels being forced upon a Taper Square-ended Axle, by Machinery, and then riveted (the machine securing truth), it is impossible that they can come loose or get within gauge. They are very cheaply fitted on, and run exceedingly true. We construct the Arms of wheels upon the curved principle (as shown in the drawings above), consequently the shrinkage or cooling of the Castings is not interfered with, thus securing the greatest advantages of our very strong material. CRUCIBLE CAST-STEEL WHEELS, when cast by us, are made from one-third to one-half lighter than Cast-Iron. They cannot be broken while working, even with rough usage and will wear at least twelve times as long as Cast-Iron, thus saving animal and steam power, and reducing wear and tear immensely. We would also draw special attention to our INCLINE PULLEYS and CAGE GUIDES, the adoption of which will prove highly advantageous.

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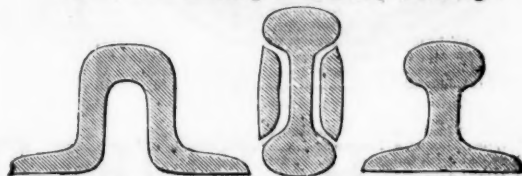
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## THE MINING SHARE LIST.

## BRITISH DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
10000 Caron, <i>i</i> , Cardigan	2 0 0	1 1/2	1 1/2	0 4 0	0 2 0	Feb. 1878
10000 Carn Brea, <i>c</i> , <i>i</i> , Illogan	56 7 6	80	80 85	308 0 0	1 0 0	Feb. 1874
10240 Devon Gr. Consols, <i>c</i> , <i>s</i> , Tavistock	1 0 0	13	12 1/2	117 13 0	0 10 0	May 1880
4296 Dolcoath, <i>c</i> , <i>t</i> , Camborne	10 14 0	55	53 56	117 11 3	1 10 0	June 1880
6400 East Pool, <i>t</i> , <i>c</i> , Illogan	0 9 9	36 1/2	37 39	19 15 3	1 2 6	June 1880
40000 Glasg. Car., <i>c</i> , 30000 sh. £1 pd., 10000	15s. pd.]	1 1/2	1 1/2	0 13 10	0 6 0	Aug. 1878
7500 Gorse and Merlyn Con., <i>i</i> , Flint	2 10 0	2 1/2	2 1/2	0 5 0	0 5 0	Aug. 1877
15000 Great Laxey, <i>i</i> , Isle of Man	4 0 0	19 1/2	18 1/2	26 2 0	0 8 0	July 1880
6400 Green Hurth, <i>i</i> , Durham	0 6 0	6 1/2	6 1/2	2 10 0	0 5 0	Mar. 1880
20000 Grogwinion, <i>i</i> , Cardigan	2 0 0	3 1/2	2 3	0 16 4	0 1 6	July 1880
2800 Isle of Man, <i>i</i> , Isle of Man	25 0 0	—	—	82 5 0	0 10 0	Feb. 1879
20000 Lerdhills, <i>i</i> , Lanarkshire	6 0 0	4	3 1/2	0 15 0	0 3 0	Mar. 1878
400 Lisburne, <i>i</i> , Cardigan	18 15 0	37 1/2	35 37 1/2	601 10 0	1 0 0	June 1880
10000 Mellanar, <i>c</i> , Hayle	2 6 0	5 1/2	5 1/2	0 18 6	0 2 6	July 1880
9000 Minera Mining Co., <i>i</i> , Wrexham	5 0 0	12	11 1/2	68 13 2	0 4 0	May 1880
20000 Mining Co. of Ireland, <i>c</i> , <i>i</i> , <i>s</i>	7 0 0	2 1/2	2 1/2	24 0 0	0 2 6	Jan. 1880
8000 Mona, <i>c</i> , Anglesea	5 0 0	16	14 1/2	9 10 0	0 10 0	July 1880
5328 North Bury, <i>c</i> , <i>i</i> , Chacewater	0 5 8	1 1/2	1 1/2	0 3 4	0 10 0	Oct. 1878
11829 North Hendre, <i>i</i> , Wales	2 10 0	—	—	3 10 0	0 7 6	Mar. 1880
8063 Ditto	1 0 0	—	—	0 7 0	0 3 0	Mar. 1880
6000 Pennant, <i>i</i> , North Wales	5 0 0	3 1/2	3 3/2	0 10 0	0 5 0	Mar. 1878
12000 Phoenix United, <i>c</i> , <i>i</i> , Link	5 10 3	4 1/2	3 1/2	0 2 6	0 6 0	Mar. 1880
18000 Pr. Butwick, <i>s</i> , <i>i</i> , (alg. 12000 pf. 10 p.c.)	2 10 0	—	—	0 18 0	0 2 6	Jan. 1878
10000 Red Rock, <i>i</i> , Cardigan	1 0 0	2	1 1/2	0 4 0	0 2 6	Jan. 1878
12000 Roman Gravel, <i>i</i> , Salop	7 10 0	11	10 1/2	8 1 0	0 5 0	Apr. 1880
4000 Rhodulyn, <i>i</i> , Wales	10 0 0	—	—	0 5 0	0 5 0	Apr. 1880
512 South Cardow, <i>c</i> , St. Cleer	1 5 0	95	85 95	749 0 0	1 0 0	July 1880
6123 South Condurow, <i>c</i> , <i>i</i> , Camborne	6 5 6	10 1/2	9 10 1/2	7 2 0	0 1 0	July 1880
9000 South Daren, <i>i</i> , Cardigan	1 10 0	3	2 1/2	0 4 0	0 2 6	Apr. 1880
4500 South Wheel Franch, <i>i</i> , Illogan	7 12	4 1/2	4 1/2	40 15 6	0 10 0	July 1880
12000 Tankerville, <i>i</i> , Salop	6 0 0	4 1/2	3 1/2	4 17 6	0 5 0	Jan. 1877
6000 Tinkoff, <i>c</i> , <i>i</i> , Pool, Illogan	11 10 0	18 1/2	18 1/2	50 8 6	0 5 0	May 1877
15000 Van, <i>i</i> , Llandidies	4 5 0	19	18 1/2	24 18 0	0 7 6	July 1880
3000 West Chiverton, <i>i</i> , Perranzabuloe	19 15 0	—	—	55 10 0	0 10 0	Feb. 1878
512 West Tugus, <i>c</i> , Redruth	95 10 0	—	—	50 52 1/2	0 3 0	Jan. 1879
1200 West Wheat Seton, <i>c</i> , Camborne	25 10 0	—	—	20 22 1/2	0 6 0	Apr. 1880
12000 Wheel Crebor, <i>c</i> , Tavistock	2 4 0	6	5 1/2	0 6 0	0 2 6	July 1880
1024 Wheel Eliza Consols, <i>c</i> , St. Austell	18 0 0	—	—	34 10 0	0 4 0	May 1880
4295 Wheel Kitty, <i>c</i> , St. Agnes	5 4 6	5 1/2	5 1/2	12 14 6	0 5 0	May 1880
3000 Wheel Peavor, <i>i</i> , Redruth	7 11 0	31 1/2	33 35	5 6 0	1 5 0	June 1880

## FOREIGN DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500 Alamillos, <i>i</i> , Spain	2 0 0	1 1/2	1 1/2	2 0 0	0 1 0	Apr. 1880
130000 Almaden and Tinto Consol., <i>s</i> , <i>i</i>	1 0 0	3 1/2	3 1/2	0 6 3	0 1 0	May 1876
20000 Australian, <i>c</i> , South Australia	7 7 6	1 1/2	1 1/2	1 3 8	0 2 0	Aug. 1879
20000 Cape Copper Mining, <i>i</i> , South Africa	7 0 0	40	40 42	38 7 6	1 0 0	June 1880
35000 Cesapa Sulph. Co., Romagna, Italy	10 0 0	—	—	1 1 0	0 1 0	Aug. 1879
10000 Cesapa, <i>c</i> , Ohili (420 shares)	17 0 0	8 1/2	8 9	7 14 5	0 3 0	July 1880
23500 Eberhardt and Aurora, <i>s</i> , Nevada	10 0 0	3	2 1/2	1 8 0	0 3 0	Dec. 1877
7000 English & Australian, <i>i</i> , <i>c</i> , <i>s</i> , Aust.	2 10 0	1 1/2	1 1/2	2 18 9	0 1 0	Mar. 1880
25000 Fortuna, <i>i</i> , Spain	2 0 0	5	4 1/2	7 11 5	0 5 0	Apr. 1880
55000 Frontino & Bolivia, <i>c</i> , New Gran.	2 0 0	3 1/2	3 1/2	0 5 0	0 1 0	June 1880
15000 Linares, <i>i</i> , Spain	3 0 0	6	5 1/2	18 2 10	0 8 0	Apr. 1880
2000 Pontgibaud, <i>s</i> , France	20 0 0	20	18 20	27 17 6	0 10 0	Dec. 1879
100000 Port Phillip, <i>c</i> , Clunes (42 shares)	1 0 0	—	—	1 13 4	0 1 0	Mar. 1880
54000 Richmond Consol., <i>s</i> , Nevada	5 0 0	15 1/2	15 1/2	9 1 6	0 10 0	June 1880
1858880 Rio Tinto, <i>c</i> , Sp. Coup. Bds., Huévala	100 0 0	95	95 95	5 per cent.	—	Jan. 1880
41125 Ditto, Mortgage Bonds	20 0 0	—	—	7 per cent. per ann.	—	Jan. 1880
225000 Ditto, shares	10 0 0	12 1/2	12 1/2	0 10 0	0 10 0	Apr. 1880
40000 Santa Barbara, <i>c</i> , Brazil	0 10 0	2	1 1/2	0 10 9	0 2 0	Apr. 1880
120000 Scottish Australian Mining Co., <i>i</i>	1 0 0	2 1/2	2 1/2	15 p. cent.	—	May 1880
80000 Ditto, New	9 10 0	1 1/2	1 1/2	15 p. cent.	—	May 1880
50000 Sentein, <i>s</i> , <i>i</i> , <i>c</i> , Arrière, France	1 0 0	—	—	0 2 0	0 2 0	Jan. 1880
22500 Sierra Buttes, <i>c</i> , California	2 0 0	1 1/2	1 1/2	2 0 6	0 1 6	Apr. 1879
40625 Ditto, Plumas Estate	2 0 0	2 1/2	2 1/2	2 7 0	0 3 0	Oct. 1879
253000 St. John del Rey (1/5 Stock and multiples dealt in)	225 235	—	—	12 1/2 p.c. for half-year, June 1879	—	—
20000 Tolima, <i>c</i> , <i>s</i> , Colombia	5 0 0	—	—	1 3 0	0 4 0	Mar. 1880
25000 Victoria (London), <i>c</i> , Australia	1 0 0	—	—	0 13 1/2	0 7 1/2	July 1879
2100 W. Prussian (5500 pref. sh. £10 pd.)	10 0 0	10 1/2	10 10 1/2	2 18 0	0 8 0	July 1880

Have made calls since last dividend was paid.

## NON-DIVIDEND BRITISH MINES.

Shares.	Paid.	Last wk.	Clos. pr.
25600 Aberllyn, <i>i</i> , <i>c</i> , Carnarvon	1 0 0	1 1/2	1 1/2
12000 Asheton, <i>i</i> , Carnarvonshire	5 0 0	—	—
11583 Bedford Unit., <i>c</i> , Tavis (£1 lib.)	0 4 0	1 1/2	1 1/2
25000 Belowda, <i>c</i> , <i>i</i> , Roche	1 0 0	1 1/2	1 1/2
600 Bendiguld, <i>s</i> , <i>i</i> , Wales	10 0 0	13	12 1/2
30000 Bettw-y-Coed, <i>i</i> , (2000 sh. issued)	1 0 0	—	—
8000 Blue Yaelan, <i>i</i> , Cardigan	1 0 0	—	—
2333 Blue Hills, <i>c</i> , <i>s</i> , St. Agnes	4 6 0	4 1/2	4 1/2
30000 Bodidris, <i>i</i> , <i>c</i> , Denbighshire	1 0 0	1 1/2	1 1/2
200 Botallack, <i>c</i> , <i>s</i> , St. Just	128 5 0	20	18 20
10000 British, <i>s</i> , <i>i</i> , Wrexham	2 0 0	3	2 1/2
20000 Bwlch United, <i>i</i> , (£1 sh.) Cardigan	0 12 6	3	2 1/2
50000 Cambrian, <i>s</i> , <i>i</i> , <i>c</i> , Cardigan	2 0 0	2 1/2	2 1/2
6000 Carn Camborne, <i>c</i> , <i>s</i> , Camborne	0 2 6	2 1/2	2 1/2
20000 Carnarvon, <i>c</i> , Carnarvonshire	1 0 0	1 1/2	1 1/2
5120 Clementina, <i>i</i> , Llanrwst	1 0 0	1 1/2	1 1/2
25000 Coed Mawr Pool, <i>i</i> , Carnarvon	2 0 0	—	—
2450 Cook's Kitchen, <i>i</i> , Illogan	28 14 9	8	7 1/2
15500 Court Orange, <i>s</i> , <i>i</i> , <i>c</i> , Cumberland	0 17 6	—	—
8000 Crook Burn, <i>i</i> , <i>c</i> , Cumberland	0 5 0	1 1/2	1 1/2
14000 Crosswood Mining Lands, <i>i</i>	1 0 0	1 1/2	1 1/2
15000 Cwm Dyfford, <i>c</i> , <i>s</i> , <i>i</i> , Carnarvon	1 0 0	—	—
25000 Cwm Pryll, <i>s</i> , <i>i</i> , (£2000 sh. issued)	1 0 0	—	—
1280 D'Eresby Consols, <i>i</i> , <i>c</i> , Carnarvon	10 0 0	—	—
1024 D'Eresby Mountain, <i>i</i> , <i>c</i> , Llanrwst	20 0 0	—	—
20000 Denbighshire Consolidated, <i>i</i>	3 0 0	3	2 3
12000 Derwent, <i>i</i> , <i>c</i> , Durham	4 0 0	2 1/2	2 3
100000 Devon, <i>c</i> , <i>i</i> , Tavis (125000 iss.)	1 0 0	1 1/2	1 1/2
12000 Devon Great United, <i>i</i>	0 1 0	2 1/2	2 1/2
20000 Devonshire, <i>s</i> , <i>i</i> , <i>c</i> , Lydford	1 0 0	1 1/2	1 1/2
18000 Dobby Syke, <i>i</i> , <i>c</i> , Durham	0 17 6	—	—
8000 East Botallack, <i>c</i> , St. Just	0 2 0	1 1/2	1 1/2
6144 East Caradon, <i>c</i> , St. Cleer	3 7 0	1 1/2	1 1/2
4000 East Chiverton, <i>i</i> , Perranzabuloe	9 10 3	1 1/2	1 1/2
3000 East Craven Moor, <i>i</i> , Pateley Bdg.	10 0 0	9	8 9
12000 East Crebor, <i>c</i> , Tavistock	0 4 0	3 1/2	3 1/2
15000 East Devon Consols, <i>c</i> , Buckfastleigh	2 0 0	2 1/2	2 1/2
30000 East Florida, <i>s</i> , <i>i</i> , Cardigan	1 0 0	1 1/2	1 1/2
10000 East Longstone, <i>s</i> , <i>i</i> , Lezant	1 0 0	—	—
21000 East Roman Gravel, <i>i</i> , Salop	1 0 0	1 1/2	1 1/2
12000 East Tawel, <i>i</i> , Llandidies	5 0 0	2 1/2	2 1/2
4098 East Wheel Buller, <i>c</i> , <i>s</i> , Gwennap	10 0 0	1 1/2	1 1/2
1114 East Wheel Lovell, <i>i</i> , Helston	13 8 6	1 1/2	1 1/2
30000 Flinthash Great Consols	1 0 0	1 1/2	1 1/2
10000 Fothergill, <i>c</i> , St. Stephens	1 0 0	2 1/2	2 1/2
12500 Frongoch, <i>i</i> , Cardigan (11000 sh. iss.)	2 0 0	3 1/2	3 1/2
3950 Gawn, <i>c</i> , Tavistock	4 9 6	—	—
14000 Glenroy, <i>s</i> , <i>i</i> , Isle of Man	4 0 0	7 1/2	7 1/2
20000 Great Dyfford (10000 sh. issued)	1 0 0	1	1 1/2
20000 Gt. E. Foxdale, <i>i</i> , <i>c</i> , <i>s</i> , (£1 sh.)	0 18 0	—	—
12000 Great Holway, <i>i</i> , <i>c</i> , Flintshire	5 0 0	5	4 5
6000 Great Wh. Eleanor, <i>i</i> , North Bovey	2 0 0	—	—
9880 Grannislake (Clitters), <i>i</i> , <i>c</i>	5 5 0	4	4 1/2
10000 Gwern-y-Mynydd, <i>s</i> , <i>i</i> , Flintshire	4 0 0	4	3 3/2
10000 Harehope Gill, <i>i</i> , <i>c</i> , Durham (£1 sh.)	0 5 0	—	—
12000 Hartington Moor, <i>c</i> , <i>s</i> , <i>i</i> , Derby	1 1 0	1 1/2	1 1/2
6400 Harwood, <i>i</i> , <i>c</i> , Durham	0 15 0	—	—
30000 Herodfoot, <i>i</i> , near Liskeard	1 0 0	3 1/2	3 1/2
18000 Hingston Down, <i>c</i> , <i>s</i> , <i>i</i> , Calstock	0 7 0	1 1/2	1 1/2
6000 Killbreth, <i>i</i> , Chacewater	3 10 0	—	—
30000 Lady Ashburton, <i>c</i> , <i>s</i> , <i>i</i> , Calington	0 10 0	—	—
15000 Lady Bertha, <i>c</i> , <i>s</i> , Tavistock	0 10 0	—	—
12000 Ladywell, <i>i</i> , <i>c</i> , Salop (20000 pref. also)	2 10 0	3 1/2	3 1/2
5000 Lead Era, <i>i</i> , Mold	2 10 0	—	—
2500 Levant, <i>c</i> , <i>s</i> , St. Just	11 0 0	—	—
10000 Lomax, <i>s</i> , <i>i</i> , Helston	1 0 0	1 1/2	1 1/2
5120 Lovell, <i>i</i> , Wendron	0 16 0	1 1/2	1 1/2
30000 Llanrwst, <i>s</i> , <i>i</i> , Carnarvon	2 0 0	1 1/2	1 1/2
7500 Ditto, 10 per cent. pref.	2 0 0	1 1/2	1 1/2
9000 Marke Valley, <i>c</i> , Linkinhorne	5 11 0	2 1/2	2 1/2
12000 Marston, <i>i</i> , <i>c</i> , South Wales	0 10 0	1 1/2	1 1/2
8000 Medlyn Moor, <i>i</i> , Wendron	3 15 0	—	—
28000 Mid-Devon, <i>c</i> , <i>s</i> , (£17000, 3s. 4d. pd.)	0 6 8	3 1/2	3 1/2
8000 Mineral Corporation, <i>c</i> , <i>s</i> , <i>i</i> , Flint	1 0 0	1 1/2	1 1/2
20000 Mostyn Consols, <i>s</i> , <i>i</i> , <i>c</i> , Flint	1 0 0	1 1/2	1 1/2
10000 Mynydd Gwddu, <i>i</i> , Cardigan	3 0 0	—	—
25000 Moray River (18000 issued)	2 0 0	4	3 1/2
12000 Moria Du, <i>c</i> , <i>s</i> , <i>i</i> , Anglesea	1 0 0	1 1/2	1 1/2
6144 Mount Carbis, <i>i</i> , <i>c</i> , Redruth	0 10 0	1 1/2	1 1/2
4678 New Broadly, <i>s</i> , <i>i</i> , <i>c</i> , Cardigan (20 sh.)	3 15 0	—	—
12000 New Cathedral, <i>c</i> , <i>s</i> , Gwennap	1 0 0	—	—
2400 New Cook's Kitchen, <i>i</i> , Illogan	7 7 0	8 1/2	7 1/2
8000 New Dolcoath, <i>c</i> , <i>s</i> , Camborne	3 0 0	—	—

## NON-DIVIDEND MINES—continued.

Shares.	Paid.	Last wk.	Clos. pr.
9000 New Kitty, <i>c</i> , St. Agnes	0 2 0	—	—
10000 New Llanfair, <i>i</i> , Carnarvon	1 0 0	—	—
12000 New Penros, <i>c</i> , <i>s</i> , Helston (1 1/2 sh.)	0 2 0	—	—
3000 New Wheal Peavor, <i>i</i> , Redruth	0 10 0	—	—
3500 New Zincroft, <i>c</i> , <i>s</i> , Lelant	6 0 0	—	—
35000 New Wye Valley, <i>i</i> , Montgomery	1 0 0	—	—
10000 N. D'Eresby Mount, <i>i</i> , <i>c</i> , Carnarv.	1 0 0	—	—
12000 North Herodfoot, <i>i</i> , Liskeard	0 5 0	—	—
2000 North Levant, <i>c</i> , <i>s</i> , St. Just	13 6 0	—	—
50000 North Molton, <i>c</i> , <i>s</i> , <i>i</i> , Devon	1 0 0	—	—
6000 North Penstruthal, <i>c</i> , <i>s</i> , Gwennap	1 0 0	—	—
2336 North Trekerby, <i>c</i> , St. Agnes	8 17 10	—	